PB90-120767

Superfund Record of Decision (EPA Region 4): Celanese (Shelby Fiber Operations), NC. (Second Remedial Action) March 1989

(U.S.) Environmental Protection Agency, Washington, DC

28 Mar 89

U.S. Department of Commerce
National Technical Information Service
NTIS

United States
Environmental Protection
Agency

Office of
Emergency and
Remedial Response

EPA/ROD/R04-89/046
March 1989

PB90-120767

EPA

Superfund Record of Decision:

Celanese (Shelby Fiber Operations), NC

REPRODUCED BY
U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE
SPRINGFIELD, VA. 22161

16. Abstract (Continued)

drum storage and staging area. Four additional buried waste areas are located to the north and outside of the main plant perimeter fence: a polymer and fiber landfill, a construction debris landfill, a 21-acre sludge disposal area, and a drum storage area which temporarily stored 2,000 to 3,000 drums of waste chemicals and solvents from 1970 to 1978. The drums were removed by 1978. A 1988 Record of Decision addressed extraction and treatment of contaminated ground water. This second operable unit addresses source control including contaminated sludge and soil associated with the glycol recovery unit (GRU) trenches and burn pit areas. The primary contaminants of concern affecting the soil and sediment are VOCs including benzene and TCE; other organics including phenols and PAHs; and metals including lead and chromium.

The selected remedial action for this site includes excavation of 3,710 yd^3 of glycol recovery unit (GRU) sludges, plastic chips, burn pit residuals, and sediment with onsite incineration of contaminated soil and GRU sludges and chemical fixation (solidification) of incinerator ash, plastic chips, burn pit residuals and sediment, followed by disposal of the inert, solidified material in the excavated area; regrading and filling of excavated area; and ground water monitoring. The estimated present worth cost for this remedial action is $3,500,000; O&M costs were not provided.

50272-101

REPORT DOCUMENTATION PAGE

1. REPORT NO. EPA/ROD/R04-89/046

2.

3. Recipient's Accession No. PB90 120767/AS

4. Title and Subtitle

SUPERFUND RECORD OF DECISION
Celanese (Shelby Fiber Operations), NC
Second Remedial Action - Final

5. Report Date 3/28/89

6.

7. Author(s)

8. Performing Organization Rept. No.

9. Performing Organization Name and Address

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.

(C)

(G)

12. Sponsoring Organization Name and Address

U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

13. Type of Report & Period Covered 800/000

14.

15. Supplementary Notes

16. Abstract (Limit: 200 words)

The 450-acre Celanese Fiber Operations (CFO) site is a polyester raw-material production facility located in Cleveland County, North Carolina. The plant's facilities include a plant production area, wastewater treatment area, former waste disposal areas, and a land farm area. The adjacent land is rural, and some residences are located within 1 mile of the site. The plant began operations in 1960 as Fiber Industries, Inc. and manufactured polyester polymer chip and filament yarn using the chemicals dimethyl terephthalate and ethylene glycol. The plant's waste treatment facility was constructed in phases concurrent with the manufacturing plant; thus, in the years prior to the completion of the treatment facility, chemical wastes were dumped directly into a drainage ditch. Treated effluent has been discharged to Buffalo Creek since the mid-1960s when Fiber Industries, Inc. completed construction of the treatment facility. Celanese Corporation bought the site and facilities in 1983. In addition to the discharge from the wastewater treatment plant, CFO also discharges alum-treated bandcaster water directly to Buffalo Creek. Several areas around the plant have been used for waste disposal, including old burning pits for normal plant wastes (polyester and trash), a glycol recovery unit (GRU) sludge burial area, two soak-away ponds used to contain treated sanitary sewage from 1960 to 1969, and a former (See Attached Sheet)

17. Document Analysis a. Descriptors

Record of Decision - Celanese (Shelby Fiber Operations), NC
Second Remedial Action - Final
Contaminated Media: soil, sediment
Key Contaminants: VOCs (benzene, TCE), other organics (phenols, PAHs), metals (lead, chromium)

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement

19. Security Class (This Report) None

20. Security Class (This Page) None

21. No. of Pages 131

22. Price

(See ANSI-Z39.18)

See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

COMPLIANCE BRANCH
ORIGINAL

No. DRD-4G5-0002

DECLARATION FOR THE ENFORCEMENT RECORD OF DECISION

SITE: CELANESE FIBERS OPERATIONS
SHELBY, NORTH CAROLINA

Statement of Purpose:

This decision document represents the selected remedial action for this site developed in accordance with CERCLA as amended by SARA, and to the extent practicable, the National Contingency Plan. The State of North Carolina concurs with the selected remedy.

Statement of Basis

This decision is based upon the Administrative Record for the Celanese Fibers Operations Site. The attached index identifies the items which comprise the Administrative Record upon which the selection of a remedial action is based.

Description of Selected Remedy:

This is Operable Unit Two of the Remedial Actions to be undertaken at the Site. The Operable Unit One Remedial Action is excavation and treatment of contaminated groundwater. Construction of the system is currently underway. Operable Unit Two addresses the contaminant source at the Site.

- Source control

    * Excavation of glycol recovery unit (GRU) sludges, plastic chips, burn pit residuals and stream sediments.

    * Incineration on-site of contaminated soils and GRU sludges.

    * Chemical fixation (solidification) of incinerator ash, plastic chips, burn pit residuals and stream sediments.

    * On-site disposal of inert, solidified material.

    * Regrading

    * Monitoring

Declaration

The selected remedy is protective of human health and the environment, attains Federal and State requirements that are applicable or relevant and appropriate, and is cost-effective. This remedy satisfies the preference for treatment that reduces toxicity, mobility, or volume as a principal element. Finally, it is determined that this remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

3/28/89
Date

Lee A. DeHihns III, for
Greer C. Tidwell
Regional Administrator

ENFORCEMENT RECORD OF DECISION
SUMMARY OF REMEDIAL ALTERNATIVE SELECTION

CELANESE FIBERS OPERATIONS SITE
SHELBY, NORTH CAROLINA

Prepared By:

U.S. Environmental Protection Agency
Region IV
Atlanta, Georgia

TABLE OF CONTENTS

		Page Number
1.0	SITE LOCATION AND DESCRIPTION	1
2.0	SITE HISTORY AND ENFORCEMENT ACTIVITIES	1
3.0	COMMUNITY RELATIONS HISTORY	5
4.0	SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION IN SITE STRATEGY	6
5.0	SUMMARY OF SITE CHARACTERISTICS	6
6.0	DISCUSSION OF CLEAN-UP CRITERIA (ARARS)	9
7.0	SUMMARY OF SITE RISKS	11
8.0	DEVELOPMENT AND SCREENING OF ALTERNATIVES	12
9.0	SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES	33
10.0	SELECTED REMEDY	36
11.0	STATUTORY DETERMINATIONS	37

ATTACHMENTS

		Attachment Number
1.0	RESPONSIVENESS SUMMARY	1
2.0	ADMINISTRATIVE RECORD INDEX	2

ENFORCEMENT RECORD OF DECISION
SUMMARY OF REMEDIAL ALTERNATIVE SELECTION
CELANESE FIBERS OPERATIONS SITE
SHELBY, CLEVELAND COUNTY, NORTH CAROLINA

1.0 SITE LOCATION AND DESCRIPTION

The Celanese Fibers Operations (CFO) site is a 450-acre property occupied by a polyester raw-material production facility (Figure 1-1). The site is located in south-central Cleveland County on North Carolina Highway 198. It is approximately one mile north of Earl, North Carolina and six miles south of Shelby. The nearest major city is Charlotte, North Carolina, 35 miles northeast of Shelby.

The plant facilities consist of the plant production area, wastewater treatment area, former waste disposal areas, land farm area, and the recreation and tree farm areas to the south of the main plant.

The majority of the land surface reflects cultural modification by construction, and by cutting and filling. The original soil profile has probably been either truncated or covered across much of the site, and was never conclusively identified as undisturbed during the field investigations of the RI. The plant production area is predominantly covered with buildings and paved or gravelled areas. However, to the east, toward the waste water treatment area, the site becomes more open, with the majority of the land covered by impoundments, with grass and access roads in between. The sludge land farm is north of the plant production area and overgrown with coarse grasses. The recreation area and tree farm to the south have no facilities related to the plant process.

Adjacent land use is rural; some residences are located within one mile of the site.

2.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES

Fiber Industries, Inc., a joint venture of Celanese Corporation and Imperial Chemicals, Inc., was the original owner of the plant and operated it from 1960 until 1983 when the Celanese Corporation bought out the facility. Celanese now operates it as Celanese Fibers Operations (CFO).

Operations at the Shelby facility began in April of 1960. Manufacturing operations included the production of polyester polymer chip and filament yarn. The principal chemicals involved in polymer production are dimethyl terephthalate and ethylene glycol. Other small quantity additives include titanium dioxide and antimony.

The CFO waste treatment plant was constructed in phases concurrent with the manufacturing plant. During part of the early years, chemical wastes were discharged through a ditch draining in a generally easterly direction. The ditch began near the western edge of what is now known as the former drum storage area, and travelled east to the northeast corner of the present

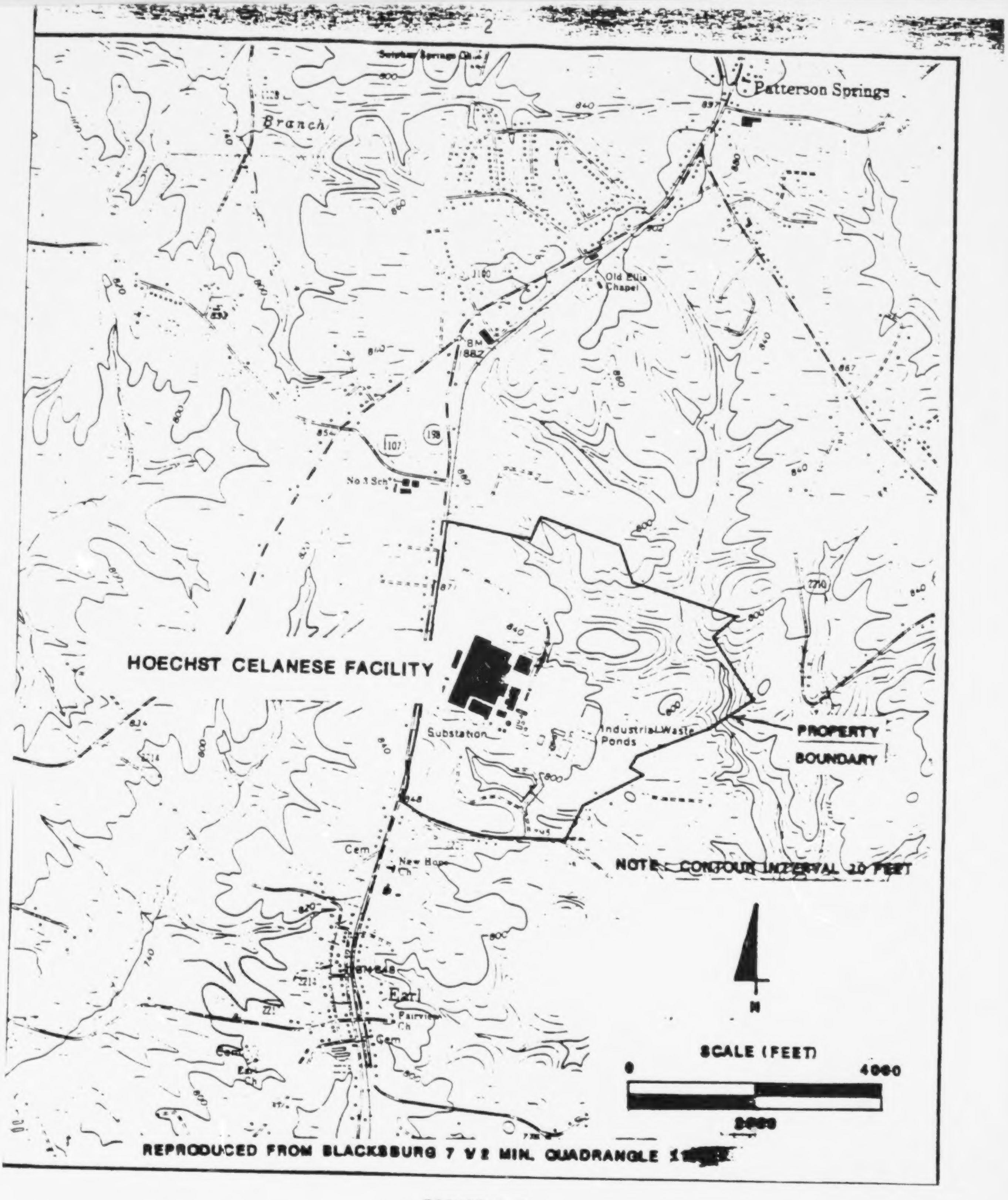

2
Sulphur Springs Ch
Patterson Springs
Branch
Old Ellis Chapel
BM 882
No 3 Sch
HOECHST CELANESE FACILITY
Substation
Industrial Waste Ponds
PROPERTY BOUNDARY
NOTE: CONTOUR INTERVAL 20 FEET
Cem
New Hope Ch
Earl
Fairview Ch
Cem
N
SCALE (FEET)
0
2000
4000
REPRODUCED FROM BLACKSBURG 7 1/2 MIN. QUADRANGLE

FIGURE 1-1

SITE LOCATION MAP

emergency spill ponds. The ditch was replaced with pipes when the waste treatment plant became fully operational in the mid-1960's. In 1973, the plant was expanded with the addition of a polishing pond, two emergency spill ponds, and an additional aeration basin. The treated effluent from the waste treatment plant is piped to a discharge point on Buffalo Creek.

The concrete-lined portions of the waste treatment facility include a chromate reduction pond which is no longer in use, a digester, three equalization basins, two aeration basins, and two clarifiers. The unlined plant units include the three polishing ponds, two sludge ponds, and two emergency spill ponds.

In addition to the discharge from the wastewater treatment plant, the Celanese facility also discharges alum-treated bandcaster water directly to Buffalo Creek. Bandcaster water is used to cook the polymer products. Both of these discharges are covered by permits from the North Carolina Department of Natural Resources.

Several areas around the plant have been used for waste disposal. Normal plant wastes (primarily polyester and miscellaneous trash) were disposed of in old burning pits located just north of the aeration basins. North and east of the burning pits, glycol recovery unit (GRU) sludge was buried during the early 1960's in trenches. Figure 2-1 shows the location of fill areas and differentiates the fill types. West of the GRU sludge burial area is a former drum storage and staging area. Solutions which failed to polymerize were stored here during the early 1960's. The drums were removed in the mid-1960's, and the storage area was backfilled. Two soak-away ponds located west of the existing aeration basins were used to contain treated sanitary sewage during the period from 1960 to 1969.

Four areas of buried waste are located to the north and outside of the main plan perimeter fence. The polymer and fiber landfill contains primarily non-hazardous inert materials such as excavation spoil and waste construction yarn. The construction debris landfill contains items such as old cinder blocks and steel strapping bands. Approximately 21 acres of the northwest quadrant of the property have been issued permits by the North Carolina Department of Natural Resources for sludge disposal since 1978.

In the period from 1970 to 1978, approximately 2000 to 3000 drums of waste chemicals and solvents, including lab packs, were stored temporarily in the area known as the drum storage area near the former burning pits. All drums were removed from the area by 1978 and sent to outside disposal facilities.

Investigation of the Celanese Fibers Operations Site began in October 1981 when CFO contracted with the firm Soil & Material Engineers, Inc. (S&ME), to install 23 groundwater monitor wells. In conjunction with the groundwater monitor well installation program, S&ME also conducted a hydrogeologic evaluation. Subsequently, CFO initiated a groundwater sampling and analysis program under the supervision of Davis & Floyd Laboratories, Inc.

S&ME also conducted an electromagnetic survey and excavated test pits at the site.

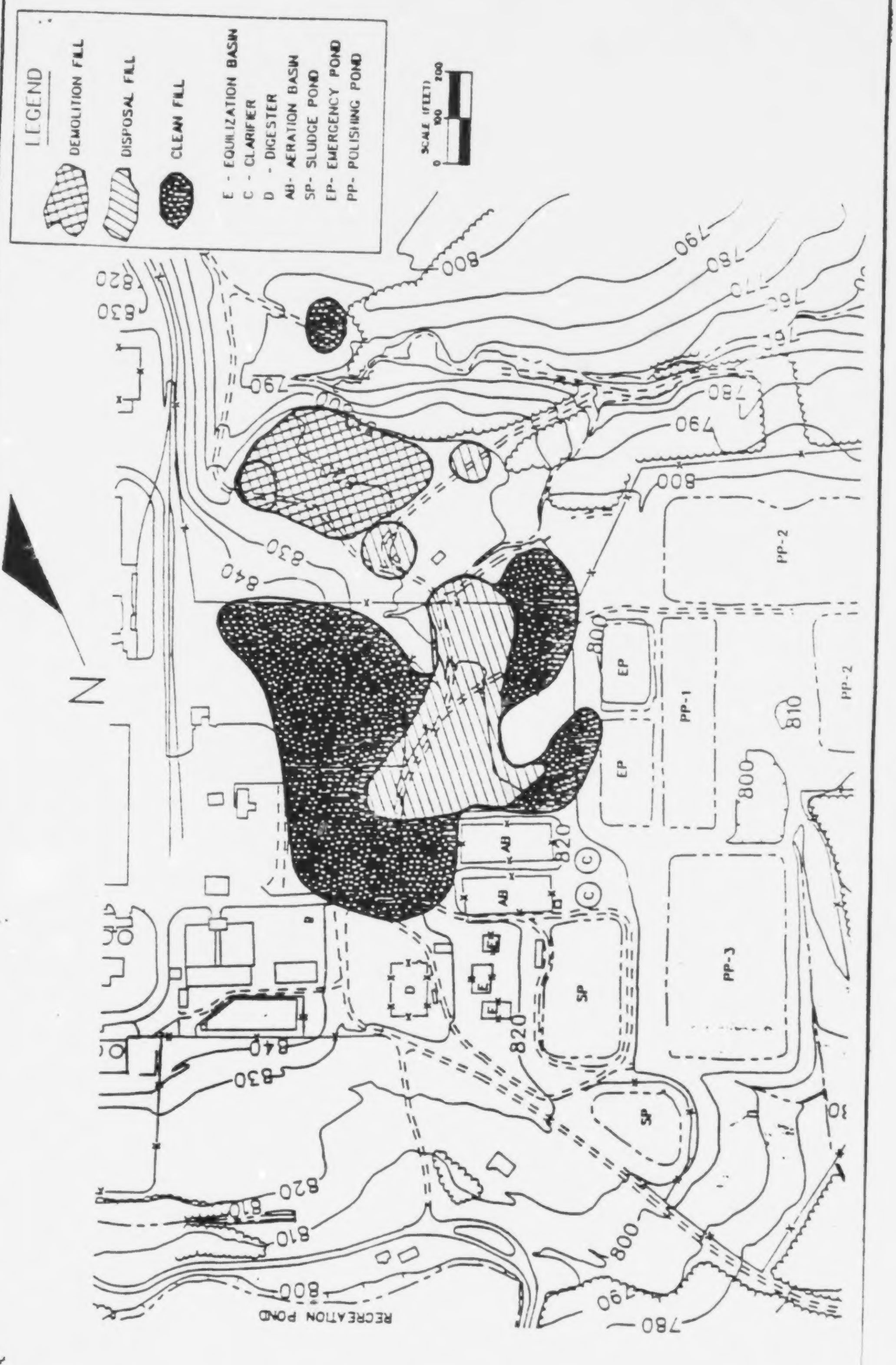

LEGEND
DEMOLITION FILL
DISPOSAL FILL
CLEAN FILL
E - EQUILIZATION BASIN
C - CLARIFIER
D - DIGESTER
AB - AERATION BASIN
SP - SLUDGE POND
EP - EMERGENCY POND
PP - POLISHING POND
SCALE (FEET)
0
100
200
N
RECREATION POND
PP-1
PP-2
PP-3
EP
SP
AB
D
E
C
840
830
820
810
800
790
780
770
760

FIGURE 2-1
DISTRIBUTION OF FILL TYPES

In October 1984, CFO was proposed for EPA's National Priorities List (NPL). Also in October 1984, there were a series of meetings between the EPA and CFO to discuss the preparation of a Work Plan for a Remedial Investigation (RI) and Feasibility Study (FS) by CFO's contractor, S&ME. Concurrent with this, EPA's contractor, Camp Dresser & McKee, Inc. (CDM), prepared a report that included a review of the data collected during previous site investigations and identified information deficiencies and data gaps to provide a basis for development of Remedial Investigation activities. These events resulted in the submission of a draft Work Plan by S&ME, on behalf of CFO, with final Work Plan submitted to EPA in November 1985. CFO signed an Administrative Order on Consent to perform the RI/FS on March 10, 1986. In June of 1986, the EPA added the site to the NPL.

The RI report for the site was final in July of 1987 and determined that two areas of the site needed to be addressed: former glycol recovery unit waste pits and other scattered disposal pits, and groundwater contaminated by the waste in those pits. Due to the groundwater contamination and the potential for it to move off-site, EPA approved SME's proposal for a two-phased clean-up action. These two phases are identified as Operable Unit One (OU #1), which focuses on the contaminated groundwater, and Operable Unit Two (OU #2), which focuses on the sludges and soils associated with the former glycol recovery unit trenches and burn pit areas.

The Operable Unit FS for the first operable unit, the groundwater remediation, was completed in February of 1988. The ROD for that Remedial Action (OU #1) was signed March 23, 1988, and required extraction and treatment of contaminated groundwater associated with the site. The potentially responsible party, Hoechst Celanese, agreed to conduct the Remedial Action for OU #1 in a partial Consent Decree June 30, 1988. It has since been entered with the Court.

The Operable Unit FS for OU #2 Remedial Action was final in February 1989. This remedial action will address contaminant source control at the site.

A special notice letter for Operable Unit Two (OU #2) was issued by the Agency and received by Hoechst Celanese on February 15, 1989. Negotiations are on-going.

3.0 COMMUNITY RELATIONS HISTORY

Two information repositories have been established for the site: one in Earl, North Carolina, and one in Shelby. Information is also available in Atlanta, Georgia, in the EPA Region IV Regional Office. Fact Sheets and press advisories were prepared prior to each public meeting. Prior to both Feasibility Study public meetings, public notices ran in local newspapers.

A public meeting was held on September 24, 1985 to present the draft RI/FS Work Plan to interested parties. A Community Relations Plan identifying a positive public outreach strategy was developed by Region IV personnel in October 1985. A public meeting was held on July 21, 1986 to present the findings of the RI to interested citizens. On February 3, 1988, a public meeting was held on the proposed plan and FS for Operable Unit One. This public meeting opened the 21 day public comment period for the Operable Unit One Feasibility Study and Proposed Plan.

Numerous questions were asked at the meeting and a number of comments were received. Few comments were on the selected alternative. The majority of the comments received were actually requests to have private wells sampled. These requests were handled by the Cleveland County Health Department in concert with the North Carolina Department of Human Services. The public showed a desire for remediation of the site.

Two availability sessions were held on August 18, 1988 to present the Remedial Design Report to the public and to allow them to get information on a one on one basis. The county commission was briefed prior to the sessions.

On February 16, 1989, a public meeting was held on the proposed plan for Operable Unit Two, and to present the Operable Unit Two Feasibility Study to interested citizens. This meeting opened the 21 day public comment period on the Proposed Plan and draft FS.

A Responsiveness Summary was prepared to summarize community concerns and EPA's community relations activities for the RODs associated with each Operable Unit.

4.0 SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION IN SITE STRATEGY

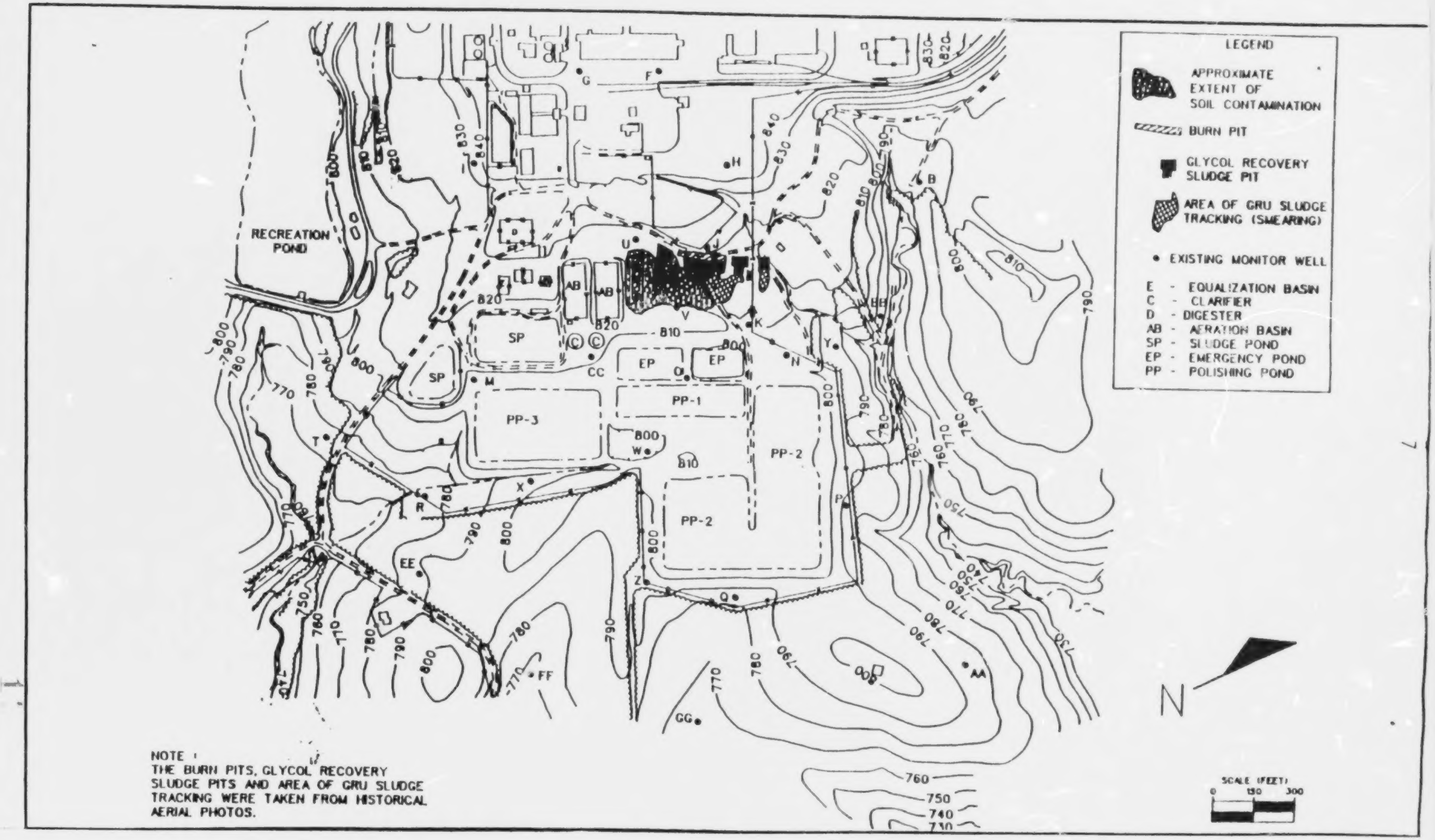
This Remedial Action (OU #2) will address a principal threat at the site posed by contaminant mass and contaminated soils remaining on-site. The principal threat at the site from subsequent groundwater contamination was addressed previously by OU #1. The principal threat of future contamination of groundwater is addressed by OU #2, the source remediation. Therefore, this Operable Unit (OU #2) is expected to be the final Remedial Action for the site.

5.0 SUMMARY OF SITE CHARACTERISTICS

Chemical analyses were performed on soil, groundwater, surface water, and sediment samples collected at the site during the RI. These analyses documented the presence of various groups of compounds including phthalates, phenols, polynuclear aromatic hydrocarbons (PAHs), other semi-volatiles, volatile organics and metals.

The RI included the collection of soil samples from test borings, well borings and test pits. These samples were collected from areas suspected of containing the contaminant sources (disposal fill area), upgradient (background area) and downgradient areas.

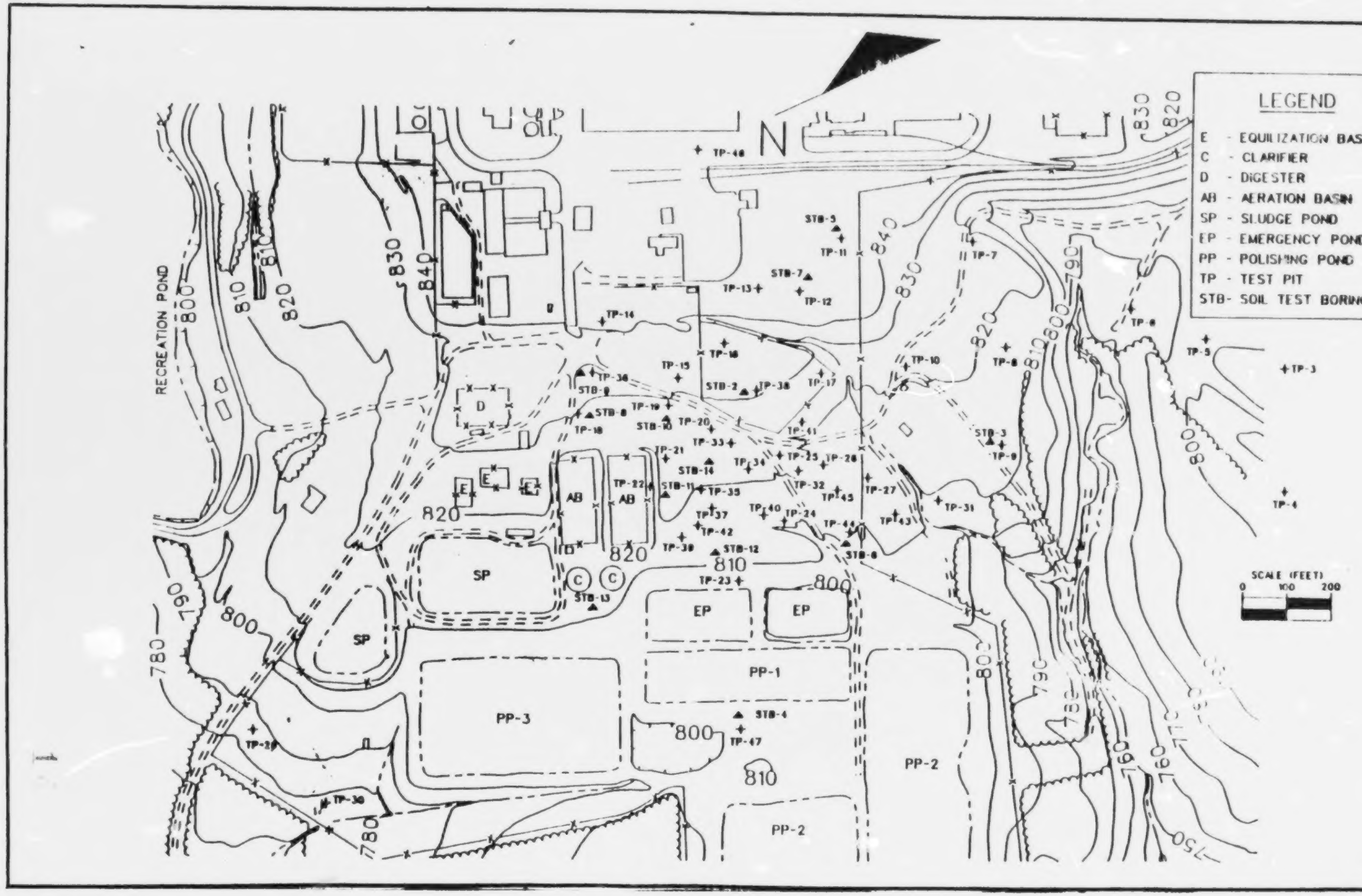
The western terrace of the lawn area adjacent to the wastewater treatment plant encompasses the GRU disposal pits and former burn pits. This area is thought to be the primary source of contamination being released to groundwater and surface water systems. The general location of the disposal


LEGEND
APPROXIMATE EXTENT OF SOIL CONTAMINATION
BURN PIT
GLYCOL RECOVERY SLUDGE PIT
AREA OF GRU SLUDGE TRACKING (SMEARING)
• EXISTING MONITOR WELL
E - EQUALIZATION BASIN
C - CLARIFIER
D - DIGESTER
AB - AERATION BASIN
SP - SLUDGE POND
EP - EMERGENCY POND
PP - POLISHING POND
N
SCALE (FEET)
0
150
300
RECREATION POND
SP
SP
AB
AB
EP
EP
PP-1
PP-2
PP-2
PP-3
D
C
C
B
F
G
H
K
M
N
P
Q
R
T
U
V
W
X
Y
Z
AA
BB
CC
EE
FF
GG
730
740
750
760
770
780
790
800
810
820
830
840

NOTE :
THE BURN PITS, GLYCOL RECOVERY SLUDGE PITS AND AREA OF GRU SLUDGE TRACKING WERE TAKEN FROM HISTORICAL AERIAL PHOTOS.

FIGURE 5-1

APPROXIMATE LOCATION OF CONTAMINANTS



LEGEND
E - EQUILIZATION BASIN
C - CLARIFIER
D - DIGESTER
AB - AERATION BASIN
SP - SLUDGE POND
EP - EMERGENCY POND
PP - POLISHING POND
TP - TEST PIT
STB - SOIL TEST BORING
SCALE (FEET)
0
100
200
N
RECREATION POND
D
E
AB
C
SP
EP
PP-1
PP-2
PP-3
TP-3
TP-4
TP-5
TP-6
TP-7
TP-8
TP-9
TP-10
TP-11
TP-12
TP-13
TP-14
TP-15
TP-16
TP-17
TP-18
TP-19
TP-20
TP-21
TP-22
TP-23
TP-24
TP-25
TP-26
TP-27
TP-29
TP-30
TP-31
TP-32
TP-33
TP-34
TP-35
TP-36
TP-37
TP-38
TP-39
TP-40
TP-41
TP-42
TP-43
TP-44
TP-45
TP-46
TP-47
STB-2
STB-3
STB-4
STB-5
STB-6
STB-7
STB-8
STB-9
STB-10
STB-11
STB-12
STB-13
STB-14
750
760
770
780
790
800
810
820
830
840

FIGURE 5-2

EXPLORATION POINT LOCATION MAP

facilities are shown on Figure 5-1 as interpreted from historic aerial photographs. Chemical analysis of soil/waste samples collected in this area documented the presence of phthalates, benzene and other non-phenolic aromatic compounds, PAHs, phenol, ketone compounds and dibenzofuran. Figure 5-2 is a map of the western terrace of the lawn area and wastewater treatment plant showing the location of exploratory test pits and test borings.

The soil geochemical data gathered during the RI and presented on the cross-sections indicate that soil contamination of various degrees extends to depths in excess of 30 feet below land surface in the probable source area. Waste volumes were estimated for the GRU sludges and burn pit wastes based on the visual description of materials encountered in test pits and soil borings, and the estimated sizes of the pits from the aerial photographs. These calculations and the results of the expanded characterization study estimate that about 3,600 cubic yards of GRU sludge and burn pit materials are buried in the lawn area.

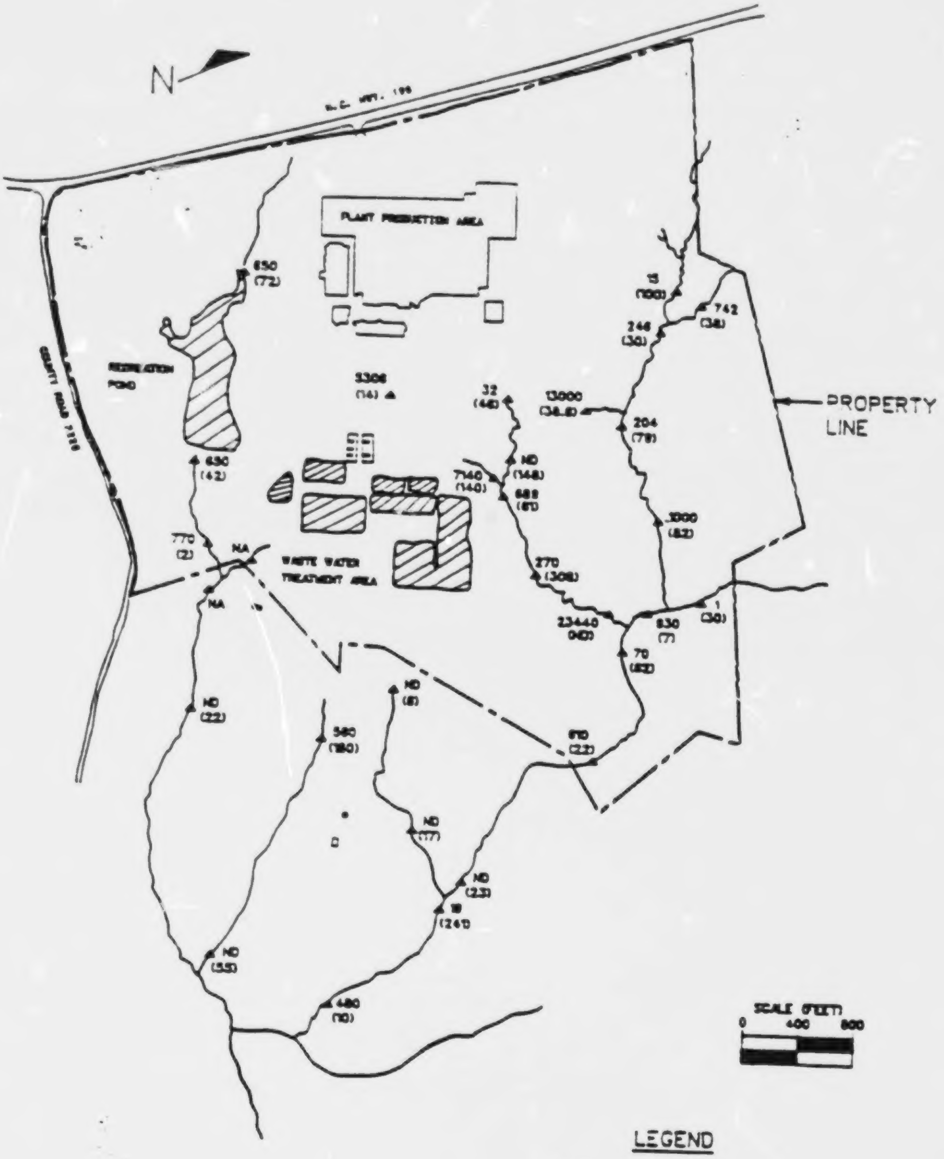
Analysis of stream sediments showed generally similar compound classes to those present in the fill areas but at lower concentrations. The phthalate group generally predominated; however, the location showing the highest organic loading also showed PAHs. The higher concentrations of compounds were generally on the perimeter streams to the north of the wastewater treatment plant. These areas were possibly subject to direct overland flow of waste or contaminated liquid during the early plant operation, may currently receive some erosional loading from the fill areas, and do receive storm water runoff from the plant production area. Figure 5-3 shows the stream sediment sampling points and the concentrations of total HSL organics measured during the RI sampling.

The total volume in cubic yards (cy) of materials in the source area is estimated to be:

GRU	Burn Pit Material	Plastic Chips & Solids	Total
1800 cy	1200 cy	600 cy	3600 cy

These values include a 20% allowance to account for soil removed while excavating these materials.

Soil below the GRU and burn pit materials have probably been contaminated by percolation of precipitation through these waste materials. Some of the soil would be excavated and remediated along with the source material. However, some contamination will be left in place because of its depth, and difficulties associated with excavating it. The contaminated material tends to liquify when exposed to friction, which complicates deep excavation. It is anticipated that the residual contamination will be removed by the inner tier groundwater extraction system after it has been leached to the water table due to the high solubility of contaminants in water.


N
N.C. HWY. 196
PLANT PRODUCTION AREA
COUNTY ROAD 7926
RECREATION POND
WASTE WATER TREATMENT AREA
PROPERTY LINE
650 (72)
3306 (14)
32 (40)
13000 (38.0)
15 (100)
742 (38)
246 (30)
204 (78)
630 (42)
7140 (140)
ND (148)
688 (61)
3000 (82)
770 (2)
NA
NA
270 (308)
23440 (40)
830 (7)
1 (30)
70 (82)
ND (22)
ND (8)
580 (180)
610 (22)
ND (17)
ND (23)
18 (24)
ND (55)
480 (10)
SCALE (FEET)
0 400 800

NOTE:

SEDIMENT CONCENTRATIONS ARE IN MICROGRAMS PER KILOGRAM. SURFACE WATER CONCENTRATIONS (IN PARENTHESES) ARE IN MICROGRAMS PER LITER.

LEGEND

N/A - NOT SAMPLED
ND - NOT DETECTED
▲ - SEDIMENT AND SURFACE WATER SAMPLING LOCATION

FIGURE 5-3

ORGANIC CONCENTRATIONS IN SEDIMENT AND SURFACE WATER SAMPLES

6.0 DISCUSSION OF CLEANUP CRITERIA (ARARs)

The requirements in CERCLA specify that remedial actions comply with applicable or relevant and appropriate requirements (ARARs). Applicable requirements mean those cleanup standards or environmental protection requirements promulgated under Federal or State law that specifically address a hazardous substance, pollutant or remedial action at a CERCLA site. Relevant and appropriate requirements means those cleanup standards or other environmental protection requirements promulgated under Federal or State law while not "applicable" to a hazardous substance, pollutant or remedial action at a CERCLA site address problems or situations similar to those encountered at a CERCLA site.

No ARARs have been established for soils. EP Toxicity testing reported in the RI indicated that representative site soils and sludges from the base of the Emergency Ponds did not leach metals above the threshold value that would classify them as hazardous and a potential metals contamination source. However, the RI analyses did identify a variety of organic compounds in both the soil/waste and groundwater, documenting the leachability of some organics.

7.0 SUMMARY OF SITE RISKS

A suite of indicator parameters was chosen, according to the guidelines put forth in the Superfund Public Health Evaluation Manual (EPA, 1986), for toxological interpretation and review purposes. Generally, this process directs the selection of chemicals which best represent the hazards associated with the site based on concentration in the environmental medium of concern and a relative toxicity constant. Application of this process resulted in the selection of benzene, trichloroethylene (TCE) bis(2-ethylhexyl) phthalate, lead, and chromium as the indicator chemicals. These were developed by considering the primary route of exposure through ingestion of groundwater.

Several assumptions were made in performing the health evaluation. It was assumed that chemicals present at the site could be transported off-site in groundwater and be consumed by persons within a 1-mile radius of the site. Further, it was assumed that off-site groundwater concentrations of indicator chemicals would equal the mean concentrations present at the site.

A comparison of the total daily indicator chemical intakes for an adult and child was made by assuming a daily water ingestion of 2 liters/day for adults and 1 liter/day for children. With the exception of bis(2-ethylhexyl) phthalate, this resulted in the estimated total daily intakes of indicator chemicals exceeding that allowed by ARARs for both children and adults.

The greatest non-carcinogenic health risks associated with potential indicator chemical exposure are due to ingestion of lead. In particular, young children (less than 6 years old) may be very sensitive to the neurotoxic effects of lead and should be considered the receptor population at greatest risk of developing lead intoxication (EPA 1984).

1

The non-carcinogenic health risks associated with the calculated exposures to benzene, bis(2-ethylhexyl) phthalate, and trichloroethylene are considered minimal. There is no human evidence to suggest that exposure to these chemicals at the calculated mean concentrations in groundwater would cause chronic health effects.

Trichloroethylene, benzene and bis(2-ethylhexyl) phthalate are considered potential carcinogens. Estimates of the cancer risk associated with potential exposure to these compounds are considered low. However, the calculated risk due to exposure to benzene is higher than the risks associated with exposure to bis(2-ethylhexyl) phthalate and trichloroethylene.

The public health assessment performed during Operable Unit One concluded that with continued release of contaminants from the source into the groundwater there is the potential for exposure to the indicator chemicals at levels above acceptable concentration levels and some potential for carcinogenic risk above the 10^{-6} risk level by down-gradient users based on a conservative scenario.

The comparison of ambient water quality criteria for aquatic life with concentration observed at stream exposure points indicates that aquatic life in the surface water in the vicinity of the Celanese Fibers site may experience toxic effects from exposures to bis (2-ethylhexyl) phthalate and chromium. Ambient water quality criteria for bis (2-ethylhexyl) phthalate indicate that acute toxic effects have been observed in freshwater at 3 ug/L (EPA, 1986). The concentrations of 20 and 50 ug/L were observed at two exposure points for bis (ethylhexyl) phthalate. Ambient water quality criteria for chromium indicate that safe levels of acute and chronic exposure to chromium are 16 and 11 ug/L for freshwater aquatic life. At one exposure point, the level of chromium was 63 ug/L, which significantly exceeded ambient water quality criteria.

8.0 DEVELOPMENT AND SCREENING OF ALTERNATIVES

8.1 INTRODUCTION

This section provides a concise description of how each alternative would address the site from initiation of the remedy to completion of site activities. Remediation of the contaminated soils, burn pit residuals, sediments, and sludges will addressed.

Applicable technologies are those techniques that may have significant beneficial site effects. Table 8-1 identifies all the potential alternatives evaluated in the preliminary screening of technologies. Table 8-2 represents those alternatives retained for in-depth analyses. Alternatives for detailed evaluation were selected to represent a range of remedial actions based upon: overall protectiveness of human health and the environment, cost-effectiveness, the use of permanent solutions and alternative treatment technologies to the maximum extent practicable, and treatment that reduces toxicity, mobility, or volume as a principal element. All alternatives considered will meet ARARs or meet the conditions for an ARARs waiver. The no action alternative is retained whether or not it attains ARARs, as proscribed by SARA, to provide a baseline for comparison of alternatives. The list of alternatives for detailed evaluation is shown in Table 8-3. In the evaluation, efforts have been made to identify and quantify potential factors that may affect the scope and cost of each alternative. For factors

Table 8-1

Preliminary Screening of Remedial Technologies

SOURCE REMEDIATION TECHNOLOGIES(1)

Remedial Technology	F	NF	Comments
o Capping		X	No significant beneficial site effects
o Grading		X	No significant beneficial site effects
o Revegetation		X	No significant beneficial site effects
o Surface water diversion and collection		X	No significant beneficial site effects
o Leaching	X		SRT-low contaminant area remediation
o Air stripping/vacuum extraction		X	No significant beneficial site effects
o Excavation and removal	X		PRT-source remediation
o Thermal destruction	X		PRT-source remediation
o Wet air oxidation	X		SRT-source remediation
o In-situ treatment	X		PRT-soil remediation
o Composting	X		PRT-source remediation
o Land application		X	No significant beneficial site effects
o Liquid biological treatment	X		PRT-source remediation
o Solidification/fixation	X		SRT-source/residual remediation

(1) Source - GRU, burn pit and plastic chips

F - Feasible for this site
NF - Not Feasible for this site
PRT - Primary Remedial Technology
SRT - Supplemental Remedial Technology

Table 8-1
(continued)
Preliminary Screening of Remedial Technologies

SEDIMENTS REMEDIATION TECHNOLOGIES

Remedial Technology	F	NF	Comments
o Capping		X	No significant beneficial site effects
o Wet air oxidation		X	No significant remediation
o Thermal destruction	X		PRT-source remediation
o Land application	X		SRT-source remediation
o Composting	X		PRT-source remediation
o Solidification/Fixation	X		SRT-source remediation
o Air stripping		X	No significant beneficial site effects
o Excavation/disposal	X		PRT-contaminant reduction

F - Feasible for this site
NF - Not Feasible for this site
PRT - Primary Remedial Technology
SRT - Supplemental Remedial Technology

TABLE 8-2
Summary of Retained Technologies

Glycol Recovery Unit Sludges

Primary Remedial Technologies	Supplemental Technologies
Excavation and Removal off-site	Leaching
Thermal Destruction	On-site treatment
Wet Air Oxidation with Effluent Treatment	Solidification/Excavation
Composting	Activated Carbon
Liquid Biological treatment	Air Stripping
On-Site Landfill	Filtration

Burn Pit Residuals, Stream Sediments and Plastic Chips

Primary Remedial Technologies

Excavation and Removal off-site

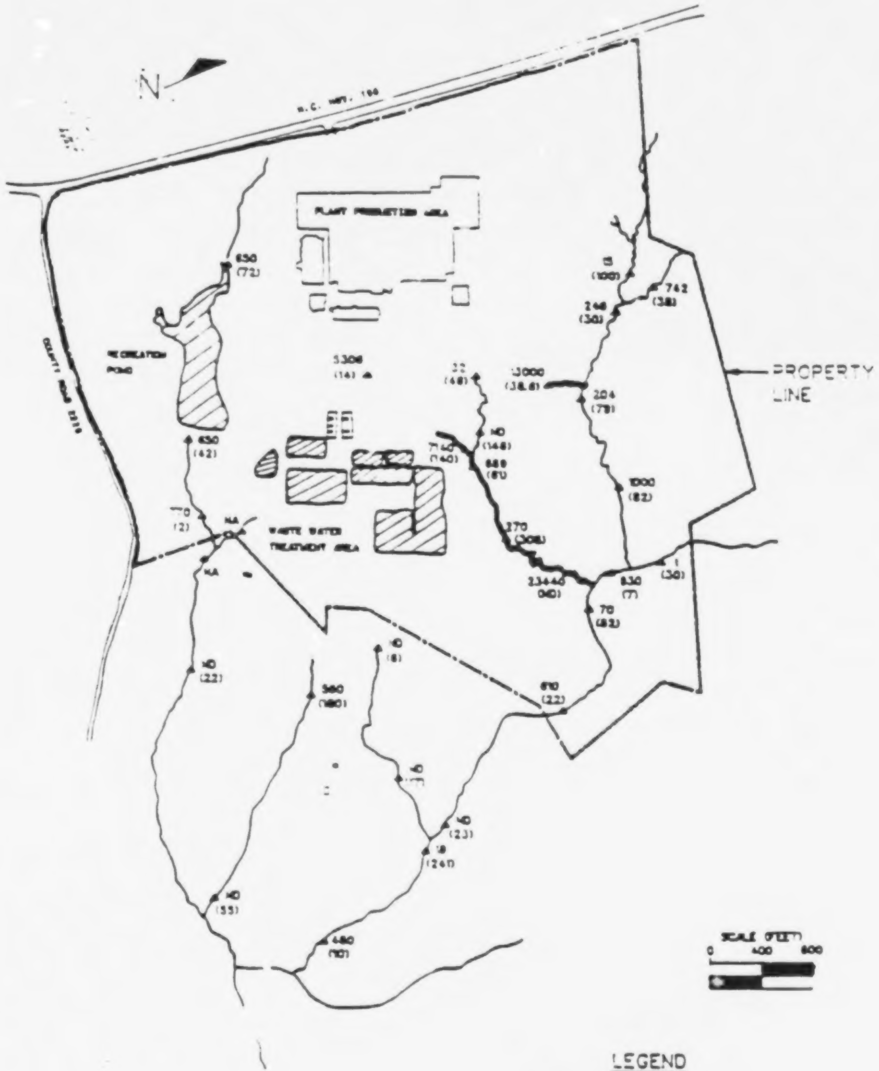
Solidification/Fixation

On-site Landfill

Table 8-3

Alternatives for Detailed Evaluation

Alternative	Description
1	No Action
2	On-site Rotary Kiln Incineration with Off-site Disposal of Residuals
3	Incineration Off-site
4	On-site Incineration with Chemical Fixation of Residuals
5	Wet Air Oxidation wtih Effluent Treatment
6	Composting- Static Pile Method
7	Composting- Windrow Method
8	Off-site Landfill Disposal


N
N.C. HWY. 194
COUNTY ROAD 2210
PLANT PRODUCTION AREA
RECREATION POND
WASTE WATER TREATMENT AREA
PROPERTY LINE
650 (72)
650 (42)
770 (2)
NA
NA
5306 (14)
32 (48)
13000 (38.8)
15 (100)
742 (38)
246 (30)
204 (78)
ND (148)
7140 (140)
688 (81)
1000 (82)
270 (308)
23440 (410)
830 (7)
1 (30)
70 (82)
610 (22)
ND (22)
380 (180)
ND (6)
ND
ND (23)
19 (241)
ND (55)
480 (110)
SCALE (FEET)
0 400 800

NOTE:

SEDIMENT CONCENTRATIONS ARE HSL ORGANICS IN MICROGRAMS PER KILOGRAM. SURFACE WATER CONCENTRATIONS (IN PARENTHESES) ARE IN MICROGRAMS PER LITER

LEGEND

N/A - NOT SAMPLED
ND - NOT DETECTED
▲ - SEDIMENT AND SURFACE WATER SAMPLING LOCATION

DARKER STREAM SEGMENTS INDICATE THOSE REQUIRING REMEDIATION

FIGURE 8-1

STREAM SEDIMENTS REQUIRING REMEDIATION

that cannot presently be quantified, assumptions will be presented.

The following are discussed for each alternative:

- engineering considerations
- operation and maintenance
- monitoring
- off-site disposal, permits and transportation
- health and safety
- cost estimates

8.2 ALTERNATIVES ANALYSIS

8.2.1 COMMON REMEDIAL COMPONENT DISCUSSION

Excavation and Regrading

Excavation of contaminant mass and contaminated soils is required for all remedial alternatives discussed, since no in-situ alternatives passed the initial screen. Based on the findings of the expanded characterization study, it was determined that excavation for the site should be by front-end loaders, backhoes or bulldozers. It is assumed that GRU, burn pit residuals, plastic chips and stream sediments will be excavated using this technology. The volume of excavated material is assumed to be 1800, 1200, 600 and 110 cubic yards, respectively, for a total estimated volume of 3710 cubic yards. Following excavation, the site would be backfilled and regraded to promote drainage. The regrading operation would be accomplished by bulldozers or graders.

Based on the extensive sampling conducted during the expanded site characterization study a great deal is known about the materials disposed of in the source area. The GRU sludges, burn pit residues, and plastic chips are all highly visible and easily identified by visual inspection. For treatment purposes material will be excavated to the waste-soil interface and to a depth of at least an additional two feet until no visible contamination remains. This should significantly reduce concentrations of indicator chemicals leaching to groundwater. Residual contamination is anticipated to be minimal and any leaching to groundwater will be mitigated by the Operable Unit One pump and treat system.

Stream Sediment Removal

Contaminated stream sediments were identified in the RI and FS for the first operable unit. Stream sediment remediation would be needed for each of the remedial alternatives except the No Action Alternative. The area north of the wastewater treatment pond is contaminated with some HSL organics (Figure 8-1). The RI found stream sediment contamination in samples representing depths of about 2 to 4 inches. It is assumed that stream segments highlighted on the figure will be excavated to a depth of 6 inches for the purpose of cost estimating. The volume of sediment needing remediation is estimated at 110 cubic yards.

Plastic Chip and Burn Pit Residual

Plastic chip and burn pit residuals are disposed in the same area as, and in some locations, co-disposed with the GRU waste. Remediation of the plastic chip and burn pit residuals would be needed for each alternative except No Action. The chip and burn pit residuals have lower organic content and thermal value than the GRU sludges (not a factor for composting alternatives) and are planned for segregation and processing separately from the GRU material for thermal treatment alternatives. Based on the characterization study, it is estimated that there are about 600 cy of plastic chips and 1200 cy of burn pit residuals for treatment or disposal.

Stream Sediment, Plastic Chip and Burn Pit Residuals

The stream sediments, plastic chips and burn pit residuals are discrete units/material types which have total HSL organic loadings of less than 1 to about 24 mg/kg where analyzed, and BTU values generally less than 2000 BTU/lb. A technical need to thermally treat these material has not been identified, and they are not technically amenable to the treatment processes evaluated. For thermal treatment alternatives costing purposes, disposal of these materials off-site at a fully RCRA-compliant secure landfill is assumed. The off-site disposal cost is included in cost analyses for all alternatives except Alternative 4 listed in Table 8-3. Alternative 4 considers fixation and on-site landfilling for the stream sediments, plastic chip and burn pit residuals.

8.2.2 ON-SITE ROTARY KILN INCINERATION WITH OFF-SITE DISPOSAL OF RESIDUALS

Description

This alternative requires source excavation and replacement with clean fill; the installation on-site of a rotary kiln incinerator to treat the GRU sludges; and the off-site disposal of the stream sediments, plastic chips and burn pit residuals as discussed under "Common Remedial Component Discussion".

Rotary kiln incinerators are cylindrical, refractory-lined shells, capable of handling a wide variety of solid and liquid wastes. They are fueled by natural gas, oil or pulverized coal. Most of the heating of the waste is due to heat transfer between the combustion product gasses and the walls of the kiln. The basic type of rotary kiln incinerator consists of the kiln and an afterburner.

Wastes are injected into the kiln at the higher end and are passed through the combustion zone as the kiln rotates. The rotation mixes the waste with combustion gases, thereby improving destruction of organic materials. Rotary kilns often employ afterburners to ensure complete combustion. Most rotary kilns are equipped with wet scrubber emission controls.

The residence time and temperature depend upon combustion characteristics of the waste. Residence times can range from a few seconds to an hour or more for bulk solids. Combustion temperatures range from 1500° to 3000°F.

Rotary kilns are capable of burning waste in any physical form. They can incinerate solids and liquids independently, or in combination, and can accept waste feed without any preparation. Hazardous wastes which have been treated in rotary kilns include PCBs, tars, obsolete munitions, polyvinyl chloride wastes and bottoms from solvent reclamation operations.

Because of ability to handle waste in any physical form and high waste destruction efficiency, rotary kilns are a preferred method for treating mixed hazardous solid residues.

The limitations of rotary kilns include susceptibility to thermal shock, the necessity for very careful maintenance, need for additional air due to leakage, high particulate loadings, relatively low thermal efficiency and a high capital cost for installation.

Overall Protection of Human Health and the Environment

Removal of contaminated soils and replacement with clean fill would substantially reduce or eliminate risk posed by dermal, inhalation, and ingestion exposure to source material at the site.

Removal of the source material would also remove contaminants which could be released to the groundwater. This would alleviate future groundwater contamination.

Incineration of GRU sludges destroys contaminants, eliminating a principal threat. Disposal in a RCRA Subtitle C facility of the ash and the remaining contaminated materials substantially reduces risk posed by dermal, inhalation, and ingestion exposure.

Compliance with ARARs

This alternative complies with ARARs.

The GRU sludges would be treated on-site in accordance with RCRA 40 C.F.R. Subpart O which applies to the mobilization, operation, and closing of thermal destruction units. These requirements, though not applicable, have been determined to be relevant and appropriate due to the similarity of the wastes being managed and the actions being taken. Specific operating practices necessary to meet the performance objectives would be determined through a trial burn at the site after the installation of the rotary kiln.

Permits are not required for on-site remedial actions at Superfund sites; however, any on-site action must meet the substantive technical requirements of the permit process. This alternative would comply with the Clean Air Act 40 CFR Part 50 concerning particulates and volatiles emissions during excavation.

The substances transported off-site for disposal in a RCRA Subtitle C facility are not RCRA listed or RCRA characteristic wastes. Landban is not ARAR. Until the EPA rule-making is completed, the CERCLA program will not consider Landban to be relevant and appropriate to soil and debris that does not contain RCRA restricted wastes.

Facilities used for off-site disposal are required by CERCLA Section 121 (5) to be in compliance with all pertinent RCRA requirements, that is, to have a RCRA permit or interim status and have an on-going corrective action for any

SWMU (Solid Waste Management Unit) releases (The Superfund Off-site Policy provides guidance on meeting this requirement).

To Be Considered

The State of North Carolina has proposed North Carolina Air Toxic Regulations as listed in the North Carolina Administrative Code, Title 15, Chapter 2, Subchapter 2D. These will be promulgated in the fall of 1989. If these are more stringent than Federal Standards these will apply to the remedial action.

Long-term Effectiveness and Permanence

Incineration of the GRU sludges permanently destroys the organic contaminants. Residuals and non-GRU contaminated materials' disposal at a RCRA Subtitle C facility is less permanent, since facility containment structures are subject to failure. No contaminants will remain on-site above health-based levels after the groundwater remediation (OU #1) is completed.

Reduction of Toxicity, Mobility, or Volume

The primary source materials will be destroyed by incineration, eliminating toxicity. Mobility and volume are not considered to be reduced by off-site containment; these effects can only be produced by treatment.

Short Term Effectiveness

Excavation of contaminated materials may increase the risk of inhalation, dermal contact, and ingestion exposure during implementation. Incinerator emissions may have potential short term impacts. Off-site transportation of stream sediments and burn pit residuals may increase short term risks to populations along the transport route.

Implementability

Incineration is a proven technology. This alternative would require a rotary kiln incinerator installed on-site. Wastes would be fed into the incinerator at a rate to provide a sufficient retention time for complete combustion. This alternative would require a test burn prior to full-scale operation. Air monitoring and analysis equipment would monitor scrubber effluent, solids residue, combustion gasses, system pressure and temperature and air flow rates.

State and Community Acceptance

The primary issue is public concern about incinerator emissions.

Cost Effectiveness

The cost estimate for this alternative is approximately $3.7 million. A complete breakdown on the cost estimate can be found in Appendix IX of the Feasibility Study Report.

8.2.3 INCINERATION OFF-SITE

Description

This alternative requires the excavation of source material and transport of the GRU material to an off-site incinerator. Contaminated materials would be replaced with clean fill. The non-GRU material would be landfilled off-site as discussed in Section 8.2.1.

Overall Protection of Human Health and the Environment

This alternative is a permanent action for destruction of the GRU source material.

Removal of contaminated material and replacement with clean fill would substantially reduce or eliminate on-site exposure and risk posed by source materials.

Removal of the source material would also remove contaminants which could be released to the groundwater. This would alleviate future groundwater contamination.

Disposal in a RCRA Subtitle C facility of the non-GRU source materials substantially reduces risk posed by dermal, inhalation, and ingestion exposure.

Compliance with ARARs

This alternative complies with ARARs.

The substances transported off-site for disposal in a RCRA Subtitle C facility are not RCRA listed or RCRA characteristic wastes. RCRA Landban 40 C.F.R. 268 is not applicable. A Relevant and Appropriate determination is not performed for remedial alternatives which involve off-site actions.

The GRU sludges would be incinerated off-site in accordance with RCRA 40 C.F.R. Subpart O at a fully-permitted facility. Facilities used for off-site disposal or treatment are required by CERCLA Section 121 (5) to be in compliance with all pertinent RCRA requirements, that is, to have a RCRA permit or interim status and have an on-going corrective action for any SWMU (Solid Waste Management Unit) releases (The Superfund Off-site Policy provides guidance on meeting this requirement).

This alternative would comply with the Clean Air Act 40 CFR Part 50 concerning particulates and volatiles emissions during excavation.

To Be Considered

The State of North Carolina has proposed North Carolina Air Toxic Regulations as listed in the North Carolina Administrative Code, Title 15, Chapter 2, Subchapter 2D. These will be promulgated in the fall of 1989. If these are more stringent than Federal Standards these will apply to the remedial action.

Long-term Effectiveness and Permanence

This alternative would have the same long-term effectiveness as Alternative 8.2.2, and would provide the same degree of permanence.

Reduction of Toxicity, Mobility, or Volume

This alternative would provide the same degree of reduction of toxicity, mobility, or volume as Alternative 8.2.2.

Short Term Effectiveness

This alternative provides the same short term effectiveness as Alternative 8.2.2, except that transportation off-site of GRU sludge materials involves more risk than off-site transportation of other contaminated materials due to the higher concentrations of carcinogens and toxic chemicals.

Implementability

This alternative would use proven technology. Waste disposal rate for the GRU sludges would be dependent on the capacity of the off-site incinerator. Use of a licensed off-site incinerator would be required. The availability of a local (South Carolina) incineration facility is an issue since South Carolina has been increasingly resistant to accepting out-of-state wastes.

Cost Effectiveness

The total cost of off-site incineration is dependent on the cost of incineration and the transportation charges. Quotations obtained for the Feasibility Study range from $600 to $1500/ton. Assuming $1000/ton, this alternative costs $3.9 million. A breakdown of the costs are contained in Appendix IX of the Feasibility Study Report.

State and Community Acceptance

The primary issue may be public concern over potential spills while transporting the waste through their community.

8.2.4 ON-SITE ROTARY KILN INCINERATION WITH CHEMICAL FIXATION OF RESIDUALS

Description

This alternative would entail the excavation of source material, incineration of the GRU material, chemical fixation of the ash and non-GRU source material, and replacement of the fixed material on-site. Clean fill would be brought in to restore the site to natural grades.

Overall Protection of Human Health and the Environment

This alternative would permanently destroy GRU sludge contaminants and would remove or minimize the potential risks associated with the material to be chemically fixed. Dermal, ingestion, and inhalation contact with site contaminants would be eliminated, and risks posed by continued groundwater contamination would be reduced.

Compliance with ARARs

This alternative complies with ARARs.

Based upon the land disposal restriction (Landban) and in accordance with 40 C.F.R. Part 26, RCRA listed or characteristic wastes which are excavated, treated, and then redeposited in the same unit of contamination constitutes placement, and therefore Landban is potentially an ARAR.

The GRU sludges would be treated on-site in accordance with RCRA 40 C.F.R. Subpart O which applies to the mobilization, operation, and closing of thermal destruction units. These requirements, though not applicable, have been determined to be relevant and appropriate due to the similarity of the wastes being managed and the actions being taken. Specific operating practices necessary to meet the performance objectives would be determined through a trial burn at the site after the installation of the rotary kiln.

Permits are not required for on-site remedial actions at Superfund sites; however, any on-site action must meet the substantive technical requirements of the permit process. This alternative would comply with the Clean Air Act 40 CFR Part 50 concerning particulates and volatiles emissions during excavation.

The chemical fixation treatment process would occur on-site.

Because fixation would result in a volume increase, and would occupy a larger area of the site, any lateral extension of the waste disposal area would require that the entire disposal area comply wtih RCRA 40 C.F.R. 264.228 and 40 C.F.R. 264.221, which are relevant and appropriate. Vertical extensions of the waste monolith do not create a new waste management area, so 40 C.F.R. 264.228 and 264.221 are not ARAR in this case.

The fixed material is not hazardous as defined by RCRA since contaminants are bound in the matrix and will not leach. The wastes undergoing fixation are not RCRA listed or characteristic wastes, and therefore Landban is not applicable. These materials are not similar to a RCRA hazardous waste, so Landban is not relevant and appropriate.

To Be Considered

The State of North Carolina has proposed North Carolina Air Toxic Regulations as listed in the North Carolina Administrative Code, Title 15, Chapter 2, Subchapter 2D. These will be promulgated in the fall of 1989. If these are more stringent than Federal Standards these will apply to the remedial action.

Long-term Effectiveness and Permanence

The GRU sludge materials will be permanently destroyed.

Fixation of the incinerator ash and non-GRU source materials may provide good long-term effectiveness and permanence. Long-term performance data for this technology in applications involving organic chemicals is not available; however, simulation data predict good long-term effectiveness and permanence. No contaminants will remain on-site above health-based levels after the groundwater remediation (OU #1) is completed.

Reduction of Toxicity, Mobility, or Volume

GRU sludge contamination is permanently destroyed in the incineration process and the volume substantially reduced. Mobility of contaminants in the ash and non-GRU source materials is reduced significantly by the chemical fixation process. The volume of solidification materials increases due to the additional volume of the admixture formulation.

Short Term Effectiveness

Excavation of contaminated materials and the mixing for the fixation process may increase the risk of inhalation, dermal contact, and ingestion exposure during implementation. Incineration emissions may have potential short term impacts.

Implementability

Incineration is a proven technology. Solidification and chemical fixation have been shown to be effective for incineration ash. Additional bench-scale or pilot testing may be required to optimize the admixture formulation.

Cost Effectiveness

The cost estimate for this alternative is about $3.5 million. A complete breakdown of the cost estimate can be found in Appendix IX of the Feasibility Study Report.

State and Community Acceptance

The primary issue is public concern over incinerator emissions.

8.2.5 WET AIR OXIDATION WITH EFFLUENT TREATMENT

Description

Wet air oxidation refers to the aqueous phase oxidation of dissolved or suspended organic materials. Oxidation occurs in an aqueous environment at temperatures ranging from 350°F to 680°F. This relatively low temperature oxidation can be accomplished due to the catalytic effect of the water and the high solubility and diffusiveness of oxygen in water at these temperatures. The water also serves to moderate the rate of oxidation by removing excess heat through evaporation. In order to prevent all of the water from evaporating, the process must be operated at pressure of 300 to 3,000 psig (pounds per square inch gage).

The oxygen required by the wet air oxidation process is provided by an oxygen-containing gas, usually air, bubbled through the wastewater, thus the term "Wet Air Oxidation."

Preheated air-wastewater mixture enters the reactor vessel where the oxygen present in the air reacts with the organic materials present in the wastewater. During oxidation of the organics, exothermic heat is released and raises the temperature of the reactor contents.

The oxidation products are primarily carbon dioxide, water and short chain organic acids. Sulfur and amino compound are converted to sulfate and ammonia, respectively, and the exhaust gasses contain no sulfur or nitrogen oxides.

The wet air oxidation unit produces two side streams; on off gas stream consisting of carbon dioxide, water vapor and trace organics and an oxidized slurry stream. The off gas stream requires water scrubbing. The oxidized slurry stream contains suspended solids and requires settling. Following the wet air oxidation unit, a clarifier or filtration system would be installed for removal of the solids. Sizing of the clarifier or filter and conditioning requirements would have to be determined from solids settling tests. Non GRU source material will be disposed of off site in a RCRA Subtitle C facility.

Overall Protection of Human Health and the Environment

Removal of contaminated materials and replacement with clean fill would substantially reduce or eliminate risk posed by potential dermal, inhalation and ingestion exposure. Removal of the source material would also alleviate future groundwater contamination by eliminating a source for continuing contamination.

Compliance with ARARs

This alternative would comply with ARARs.

The GRU sludges would be treated on-site in accordance with RCRA 40 C.F.R. Subpart O which applies to the mobilization, operation, and closing of thermal destruction units. These requirements, though not applicable, have been determined to be relevant and appropriate due to the similarity of the wastes being managed and the actions taken. Specific operating practices necessary to meet the performance objectives would be determined through a trial burn at the site after installation of the wet air oxidation unit.

Permits are not required for on-site remedial actions at Superfund sites; however, any on-site action must meet the substantive technical requirements of the permit process. This alternative would comply with the Clean Air Act 40 CFR Part 50 concerning particulates and volatiles emissions during excavation.

The substances transported off-site for disposal in a RCRA Subtitle C facility are not RCRA listed or RCRA characteristic wastes. Landban is not ARAR. Until the EPA rule-making is completed, the CERCLA program will not consider Landban to be relevant and appropriate to soil and debris that does not contain RCRA restricted wastes.

Facilities used for off-site disposal are required by CERCLA Section 121 (5) to be in compliance with all pertinent RCRA requirements, that is, to have a RCRA permit or interim status and have an on-going corrective action for any SWMU (Solid Waste Management Unit) releases (The Superfund Off-site Policy provides guidance on meeting this requirement).

To Be Considered

The State of North Carolina has proposed North Carolina Air Toxic Regulations as listed in the North Carolina Administrative Code, Title 15, Chapter 2, Subchapter 2D. These will be promulgated in the fall of 1989. If these are more stringent than Federal Standards these will apply to the remedial action.

Long-term Effectiveness and Permanence

Wet air oxidation permanently destroys the organic contaminants. Residuals and non-GRU contaminated materials' disposal at a RCRA Subtitle C facility is less permanent, since facility containment structures are subject to failure. No contaminants will remain on-site above health-based levels after the groundwater remediation (OU #1) is completed.

Reduction of Toxicity, Mobility, and Volume

The GRU sludge materials will be permanently destroyed.

Mobility and volume are not considered to be reduced by off-site containment; these effects can only be reduced by treatment.

Short-Term Effectiveness

Excavation of contaminated materials may increase the risk of inhalation, dermal contact, and ingestion exposure during implementation. Incinerator emissions may have potential short term impacts. Off-site transportation of stream sediments and burn pit residuals may increase short term risks to populations along the transport route.

Short term risks are also introduced in the additional treatment required for the effluent.

Implementability

This alternative is feasible for use. For fee purposes, the GRU wastes must be diluted prior to treatment using wet air oxidation. Unlike the incineration alternatives, this alternative produces substantial effluent that requires further treatment.

State and Community Acceptance

This alternative will probably have more public acceptance than incineration on-site since it is a closed system treatment process and uses common technologies for final effluent treatment.

Cost Effectiveness

The cost of wet air oxidation and treatment system for the effluent is approximately $6.4 million. A cost breakdown is provided in Appendix IX of the Feasibility Study report.

Wet air oxidation is typically more costly than incineration for liquid wastes and sludges. Cost effectiveness is poor since the substantial waste streams produced require the further treatment and are less desirable than the destruction of contaminants and subsequent disposal of incinerator ash afforded by incineration options.

8.2.6 COMPOSTING- STATIC PILE METHOD

Description

Contaminated source material would be removed and replaced with clean fill.

This alternative considers composting of the GRU materials and off-site disposal of the stream sediments, plastic chips and burn pit residuals as discussed in Section 8.2.1. Composting is the microbial degradation of the waste by aerobic metabolism using static piles or windrows. In this alternative, the GRU sludge is converted to compost in the four-step process of preparation, digestion, drying and curing using the Static Pile Method.

Initially, the GRU sludge is mixed with a bulking material such as wood chips or leaves to facilitate handling, to provide the necessary structure and porosity for aeration, and to lower the moisture content of the biomass to 60 percent or less. Nutrients are added as needed. Following mixing, the aerated pile is constructed and positioned over porous pipe through which air is drawn or blown. The pile is covered for insulation. Air monitoring during the mixing process will assure that volatile organics are not released above safe levels.

The aeration pile undergoes decomposition by thermophilic organisms, whose activity generates concomitant elevation in temperature to 60°C (140°F) or more. Aerobic composting conditions are maintained by drawing air through the pile at a predetermined rate. The effluent air stream is conducted in to a small pile of screened, cured compost where odorous gasses are effectively absorbed. Air monitoring will assure that VOCs are not released at unacceptable levels. After about 21 days, the composting rates and temperatures decline, and the pile is taken down, the plastic pipe is discarded, and the compost is either dried or cured depending upon weather conditions. Drying to 40 to 45 percent moisture facilitates clean separation of compost from wood chips. The unscreened compost is spread out with a front end loader to a depth of 12 inches. Periodically a tractor-drawn harrow is employed to facilitate drying. Screening is performed with a rotary screen. The chips are recyclable.

The compost is stored in piles for about 30 days to assure no offensive odors remain to complete stabilization. The compost is then ready for utilization as a low-grade fertilizer, a soil amendment, or for land reclamation.

To limit the possibility of degradation of the aquifer and surrounding streams, leachate and runoff will be diverted to a collection pond for subsequent treatment and disposal.

Overall Protection of Human Health and the Environment

Removal of contaminated source material and replacement with clean fill would substantially reduce or eliminate exposure and risk posed by exposure to hazardous compounds.

In addition to decreasing risks posed by potential dermal, inhalation and ingestion exposure, removal of the source material would also address future groundwater contamination by eliminating a source contamination.

Compliance with ARARs

Air monitoring during mixing and aerating of the compost will prevent releases in accordance with the substantive technical requirements of the Clean Air Act 40 CFR Part 50 concerning particulates and volatiles emissions during excavation and remediation activities.

To Be Considered

The State of North Carolina has proposed North Carolina Air Toxic Regulations as listed in the North Carolina Administrative Code, Title 15, Chapter 2, Subchapter 2D. These will be promulgated in the fall of 1989. If these are more stringent than Federal Standards these will apply to the remedial action.

Long-term Effectiveness and Permanence

The static pile method of composting permanently destroys the organic contaminants. Residuals and non-GRU contaminated materials' disposal at a RCRA Subtitle C facility is less permanent, since facility containment structures are subject to failure. No contaminants will remain on-site above health-based levels after the groundwater remediation (OU #1) is completed.

Reduction of Toxicity, Mobility, and Volume

Contaminants in the GRU sludges will be destroyed.

Mobility and volume are not considered to be reduced by off-site containment; these effects can only be achieved by treatment.

Short-Term Effectiveness

The alternative poses significant short term risk due to exposure from inhalation of contaminants since extensive aeration of contaminated soil is involved in implementation. The risk would persist until the remedial action is complete.

Implementability

Composting is a proven technology for municipal sludge; however, its use for hazardous or industrial waste remediation is limited. Bench scale test results are favorable. Pilot testing is recommended to fully evaluate this technology. Institutional issues associated with this alternative are disposition of residuals and possibility of contaminated leachate generation during processing and after reburial.

State and Community Acceptance

This option may have more public acceptance than incineration since it provides for on-site treatment and uses a technology familiar to the people.

Cost Effectiveness

The estimated cost of this alternative, including leachate collection and treatment, is approximately $3.2 million. A cost breakdown is provided in Appendix IX of the Feasibility Study report.

8.2.7 COMPOSTING- WINDROW METHOD

Description

This alternative considers composting of the GRU material and off-site disposal of the stream sediments, plastic chip and burn pit residuals as discussed in Section 8.2.1.

Composting is the microbial degradation of the waste material by aerobic metabolism in piles or windrows on a surfaced outdoor area. In this alternative, the windrow method is considered.

The windrows are turned periodically to provide oxygen for the microorganisms to carry out the stabilization and to carry off the excess heat that is generated by the process. Nutrients and water are added as needed.

The composting period is characterized by rapid decomposition of the waste with air being supplied by periodic turnings of the windrows. The reaction is exothermic, and wastes reach temperatures of 140°F to 160°F or higher. The period of digestion is normally about 6 weeks. This is characterized by a slowing of the decomposition rate, the temperature drops back to ambient, and the process is brought to completion.

After the decomposition is completed, the composting operations are similar to those described for the static pile method in Section 8.2.6.

Overall Protection of Human Health and the Environment

This alternative is a permanent remedial action for source material. Contaminated source material would be removed and replaced with uncontaminated fill. The GRU material would be treated via composting, and the non-GRU source material would be disposed of off-site. Removal of contaminated source material and replacement with uncontaminated fill would substantially reduce or eliminate exposure and risk posed by exposure to hazardous compounds. Risks due to soil exposure would be those due to the background concentrations of chemicals present in the uncontaminated fill.

In addition to decreasing risks posed by potential dermal, inhalation and ingestion exposure, removal of the source material would also remove contaminants which could be released to the groundwater. This would address future groundwater contamination by eliminating a source for continuing contamination.

Compliance with ARARs

Air monitoring during mixing and aerating of the compost will prevent releases in accordance with the substantive technical requirements of the Clean Air Act 40 CFR Part 50 concerning particulates and volatiles emissions during excavation and remediation activities.

To Be Considered

The State of North Carolina has proposed North Carolina Air Toxic Regulations as listed in the North Carolina Administrative Code, Title 15, Chapter 2, Subchapter 2D. These will be promulgated in the fall of 1989. If these are more stringent than Federal Standards these will apply to the remedial action.

Long-term Effectiveness and Permanence

The windrow method of composting permanently destroys the organic contaminants. Residuals and non-GRU contaminated materials' disposal at a RCRA Subtitle C facility is less permanent, since facility containment structures are subject to failure. No containments will remain on-site above health-based levels after the groundwater remediation (OU #1) is completed.

Reduction of Toxicity, Mobility and Volume

Contaminants in the GRU sludges will be destroyed.

Mobility and volume are not considered to be reduced by off-site containment; these effects can only be achieved by treatment.

Short-term Effectiveness

The alternative poses significant short term risk due to exposure from inhalation of contaminants since extensive aeration of contaminated soil is involved in implementation. The risk would persist until the remedial action is complete.

Implementability

Composting is a proven technology for municipal sludge; however, its use for hazardous or industrial waste remediation is limited. Bench scale test results are favorable. Pilot testing is recommended to fully evaluate this technology.

Institutional issues associated with this alternative are disposition of residuals and possibility of contaminated leachate generation during processing and after reburial.

State and Community Acceptance

This alternative may have more public acceptance than incineration since it provides for on-site treatment and uses technology familiar to people.

Cost Effectiveness

The estimated cost of this alternative, including leachate collection and treatment, is approximately $3.4 million. A cost breakdown is provided in Appendix IX of the Feasibility Study report.

8.2.8 OFF-SITE LANDFILL DISPOSAL

Disposal

This alternative would entail excavation of contaminant mass and contaminated soils, replacement with clean fill and regrading, and transport of source material to a fully RCRA-compliant secure landfill.

Overall Protection of Human Health and the Environment

Removal of source material and replacement with clean fill would substantially reduce or eliminate exposure and risk posed by exposure to hazardous compounds.

In addition to decreasing risks posed by potential dermal, inhalation and ingestion exposure, removal of the source material would also remove contaminants which could be released to the groundwater. This would address future groundwater contamination by eliminating a source for continuing contamination.

Compliance with ARARs

This alternative would comply with ARARs.

The substances transported off-site for disposal in a RCRA Subtitle C facility are not RCRA listed or RCRA characteristic wastes. Landban is not ARAR. Until the EPA rule-making is completed, the CERCLA program will not consider Landban to be relevant and appropriate to soil and debris that does not contain RCRA restricted wastes.

Facilities used for off-site disposal are required by CERCLA Section 121 (5) to be in compliance with all pertinent RCRA requirements, that is, to have a RCRA permit or interim status and have an on-going corrective action for any SWMU (Solid Waste Management Unit) releases (The Superfund Off-site Policy provides guidance on meeting this requirement).

Long-term Effectiveness and Permanence

Disposal of contaminated material at a RCRA Subtitle C facility is not permanent, since facility containment structures are subject to failure. No contaminants will remain on-site above health-based levels after the groundwater remediation (OU #1) is completed.

Reduction of Toxicity, Mobility, and Volume

Toxicity, mobility and volume are not considered to be reduced by off-site containment; these effects can only be produced by treatment.

Short-Term Effectiveness

This alternative provides the same short term effectiveness as Alternative 8.2.2, except the transportation off-site of GRU sludge materials involves more risk than off-site transportation of other contaminated materials due to the higher concentration of carcinogens and toxic chemicals.

Implementability

The implementability and feasibility of this alternative's components have been discussed previously as being generally reliable and established technologies.

State and Community Acceptance

The institutional issues with this alternative are whether the source material is subject to the "Landban." This alternative does not treat the source, but moves it to another site. Hence, its acceptability is not as great as an alternative which treats or destroys at least a portion of the source.

Cost Effectiveness

The approximate cost of this alternative is $1.9 million. A cost breakdown is included in Appendix IX of the Feasibility Study report.

9.0 SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

Overall Protection of Human Health and the Environment

Incineration provides for the best overall protection of human health and the environment from hazardous constituents of the GRU wastes, since the contaminants are destroyed. Off-site disposal of GRU wastes is protective of human health and the environment since it eliminates the potential for exposure to the waste. Wet air oxidation provides destruction of GRU contaminants, but not to the same extent as incineration since waste streams from the process require further treatment. Composting removes contamination from the soil permanently and destroys some part of the contamination through biological processes, but also transfers organic contaminants to the air through aeration and mixing processes, which may represent a hazard. Composting is therefore less protective than wet air oxidation, landfilling, or incineration options.

Chemical fixation is at least equally protective of human health and the environment as off-site disposal of non-GRU wastes, since both eliminate potential for exposure to the waste. Chemical fixation may be more protective, since contaminants may actually be rendered non-hazardous. This effect has not been confirmed for organic constituents.

Compliance with ARARs

All alternatives comply with ARARs. No alternative requires an ARAR waiver.

Long-term effectiveness and permanence

Incineration provides for the best long-term effectiveness and permanence since the GRU wastes are destroyed. Wet air oxidation provides for destruction of most of the GRU wastes, but subsequent process waste stream treatment may be less effective, therefore less permanent. Off-site disposal of GRU wastes provides long-term effectiveness in isolating wastes, but containment structures may be subject to failure, so that this alternative is less permanent than incineration or wet air oxidation. Composting provides for partial destruction of wastes, but also transfers contaminants to the air, providing less effectiveness and less permanence in containing or eliminating contaminants than other alternatives.

Chemical fixation provides good long-term effectiveness and may provide a more permanent remedy than containment if the matrix is shown to permanently alter the contaminants. Field data is not available; however, performance testing predicts good long-term effectiveness and permanence. Containment of non-GRU wastes provides long-term effectiveness in isolating wastes, but containment structures may be subject to failure, potentially providing less permanence.

Reduction of mobility, toxicity, or volume

Incineration destroys the contaminants, thereby eliminating toxicity and mobility, and reducing volume. Wet air oxidation also destroys the majority of the contamination, but subsequent process stream treatment may or may not result in reduction of toxicity, mobility, or volume. Composting provides for partial destruction of contaminants, but increases mobility of the contaminants through the air exposure pathway. Off-site disposal of GRU wastes does not affect the inherent toxicity, mobility, or volume of the waste.

Chemical fixation may alter the non-GRU waste contaminants, destroying toxicity. It increases volume due to the additional volume of the admixture; and it eliminates the mobility of the waste. Off-site disposal of GRU wastes does not affect the inherent toxicity, mobility, or volume of the waste.

Short-term effectiveness

All alternatives require excavation of GRU wastes and have short-term impacts on the environment due to the release of organic contaminants (VOCs) into the air. Composting alternatives have greater air effects during implementation since the waste is effectively undergoing aeration. The windrow alternative would distribute emissions over a larger area as described, while the static pile method may control release through absorption by the compost material used as an air filter, or may result in a more concentrated release at the aeration outlet. Incineration may have short-term impacts due to incineration emissions.

Off-site disposal of GRU wastes or off-site incineration of these wastes involves transportation of the waste, increasing short-term risk to populations along the transport route.

Off-site disposal of non-GRU wastes involve transportation of the wastes, also increasing short-term risk to populations along the transport route. Chemical fixation of the wastes would have short-term risks due to potential air emissions during the mixing process.

Implementability

Incineration is a proven technology. On-site incineration is subject to substantive but not to administrative requirements, and is fully implementable. Off-site incineration may be difficult to implement due to availability of incinerator capacity in South Carolina. Wet air oxidation requires dilution of the GRU wastes to meet processing requirements, but is fully implementable. Composting would require piloting prior to full implementation. Off-site disposal of GRU or non-GRU wastes is implementable.

Chemical fixation is also implementable at the site for non-GRU wastes.

Cost-Effectiveness

Detailed estimated costs are as follows:

On-site Incineration w/Off-site Disposal of Residuals and non-GRU Wastes	$3.7M
Off-site Incineration and Off-site Disposal of Residuals and non-GRU Wastes	$3.9M
On-site Incineration and Chemical Fixation of Residuals and non-GRU Wastes	$3.5M
Wet Air Oxidation w/Off-site Disposal of Residuals and non-GRU Wastes	$6.4M
Composting-Static Pile Method	$3.2M
Composting-Windrow Method	$3.4M
Off-site Landfill Disposal	$1.9M

The wet air oxidation alternative does not provide the same benefit as the incineration options, yet is more expensive, so that it is not a cost-effective alternative.

Off-site landfilling is the cheapest alternative, but does not provide for treating the waste, and does not provide the benefits of other alternatives in terms of protectiveness, long term effectiveness, or permanence. The benefits provided by the other alternatives as compared to this containment alternative justify additional expenditure. Therefore off-site landfilling is not the most cost-effective alternative.

The composting alternatives are less expensive than the incineration alternatives and provide similar benefit, but on a lesser scale. The pricing of the composting alternatives have not included costs for air monitoring or for emission control, should that be necessary. The cost differential between incineration, which assures maximum benefit, does not make composting more cost-effective. The composting alternatives are less cost-effective than the incineration alternatives.

The on-site incineration with chemical fixation of residuals alternative is the least expensive incineration alternative according to the FS cost estimates; however, the incineration alternatives do not differ greatly in cost. The on-site incineration and chemical fixation alternative is more cost-effective than the other incineration alternatives primarily because it provides much greater benefit for comparable cost. Long-term effectiveness, permanence, and protectiveness are improved, short-term risks are reduced, greater reduction of toxicity, mobility, and volume is achieved, and implementability is greater than for off-site incineration.

State Acceptance

The State of North Carolina has concurred with the selected alternative.

Community Acceptance

Three citizens attended the public meeting. They voiced some concerns over the selected remedy by were satisfied with the Agency's response. The only written comments received by the Agency during the public comment period were submitted by Hoechst-Celanese. These were addressed in the responsiveness summary.

10.0 SELECTED REMEDY

The remedy selected for source control at the site is:

- Excavation of glycol recovery unit (GRU) sludges, plastic chips, burn pit residuals and stream sediments.
- Incineration on-site of contaminated soils and GRU sludges.
- Chemical fixation (solidification) of incinerator ash, plastic chips, burn pit residuals and stream sediments.
- On-site disposal of inert, solidified material.
- Regrading
- Monitoring

This remedy will attain a 10^6 cancer risk level as it removes the source of the groundwater contamination. This risk level was established in the Operable Unit One (groundwater remediation) ROD.

11.0 STATUATORY DETERMINATIONS

The selected remedy satisfies the requirements of Section 121 of CERCLA.

Protection of Human Health and the Environment

The selected remedy will permanently destroy GRU sludge contamints and would remove or minimize the potential risks associated with the material to be chemically fixed. Dermal, ingestion, and inhalation contact with site contaminants would be eliminated, and risks posed by continued groundwater contamination would be reduced.

Attainment of ARARs

This alternative will comply with ARARs.

The GRU sludges would be treated on-site in accordance with RCRA 40 C.F.R. Subpart O which applies to the mobilization, operation, and closing of thermal destruction units. These requirements, though not applicable, have been determined to be relevant and appropriate due to the similarity of the wastes being managed and the actions being taken. Specific operating practices necessary to meet the performance objectives would be determined through a trial burn at the site after the installation of the rotary kiln.

This alternative would comply with the substantive technical requirements of the Clean Air Act 40 CFR Part 50 concerning particulates and volatiles emissions during excavation.

Because fixation would result in a volume increase, and would occupy a larger area of the site, any lateral extension of the waste disposal area would require that the entire disposal area comply wtih RCRA 40 C.F.R. 264.228 and 40 C.F.R. 264.221, which are relevant and appropriate. Vertical extensions of the waste monolith do not create a new waste management area, so 40 C.F.R. 264.228 and 264.221 are not ARAR in this case.

The State of North Carolina has proposed North Carolina Air Toxic Regulations as listed in the North Carolina Administrative Code, Title 15, Chapter 2, Subchapter 2D are to be considered. These will be promulgated in the fall of 1989 and therefore may be in place prior to initiation of the remedial action. If these are more stringent than Federal Standards these will apply to the remedial action.

Cost-Effectiveness

The on-site incineration and chemical fixation alternative is more cost-effective than the other incineration alternatives primarily because it provides much greater benefit for comparable cost. Long-term effectiveness, permanence, and protectiveness are improved, short-term risks are reduced, greater reduction of toxicity, mobility, and volume is achieved, and implementability is greater than for off-site incineration.

Utilization of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable

The on-site incineration and chemical fixation alternative represents the maximum extent to which permanent solutions and treatment can be practicably utilized for this action. Incineration will permanently destroy GRU sludge contaminants. Solidification or chemical fixation have been shown to be more permanent demobilization solutions than containment alone.

Preference for Treatment as a Principal Element

The preference for treatment is satisfied by the use of rotary kiln incineration and chemical fixation at the site. The principal threats at the site will be mitigated by use of these treatment technologies.

ATTACHMENT

1.0 RESPONSIVENESS SUMMARY

Celanese Fibers Operations Site
Shelby, North Carolina

Responsiveness Summary

This community relations responsiveness summary is divided into the following sections:

Section I: OVERVIEW. This section discusses EPA's preferred alternative for remedial action and likely public reaction to this alternative.

Section II: BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS. This section provides a brief history of community interest and concerns raised during remedial activities at the Celanese Fibers Operations site.

Section III: SUMMARY OF MAJOR COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND THE EPA RESPONSES TO THE COMMENTS. Both the comment and EPA's response are provided.

Section IV: REMAINING CONCERNS. This section describes remaining community concerns that EPA should be aware of in conducting the remedial design and remedial action at the Celanese Site.

I. OVERVIEW

At the time of the public meeting and the beginning of the public comment period, EPA presented its preferred alternative to the public. This alternative specified in the Record of Decision (ROD) includes: on-site incineration of the GRU sludges and contaminated soils; and solidification of the incinerator ash, burn pit residuals, plastic chip, and contaminated sediments. The solidified material will be disposed of on-site.

The community favors remedial action though few citizens expressed a preference for a particular process.

II. HISTORY OF COMMUNITY CONCERNS

Citizens of the Earl/Shelby area have expressed great interest in activities relating to the Celanese Fibers Operations site. The citizens of Earl, North Carolina, with the assistance of Diana Travis and other staff members of the Clean Water Fund of North Carolina, organized the United Neighbors for Cleanup at Earl because of their concern about the quality of water for their families. Les Brown, Conservation Chair of the Broad River Sierra Group of Boiling Springs, has also expressed an interest in the site. Many newspaper articles have been written by Donna Clemmer of the Shelby Star concerning contamination at the site.

III. SUMMARY OF PUBLIC COMMENTS RECEIVED DURING PUBLIC COMMENT PERIOD AND AGENCY RESPONSES

Comments raised during the February 16, 1989 Celanese Public Meeting are summarized briefly below:

Jon Johnston, Chief of the EPA Region IV North Carolina/South Carolina CERCLA Unit, encouraged audience members to express any comments or questions they had. He stressed that the remedial alternative selected for the site is proposed and not final. He also stated that citizens were welcomed to submit comments in writing or, if they wished to contact EPA by telephone, EPA staff would save them the cost of a long-distance phone call by taking their number and immediately returning the call.

The questions raised by one audience member related to the performance of the incinerator and concern about air quality protection. These questions and their accompanying responses are paraphrased below and reported verbatim in the public meeting transcript.

Q/Comment- I would like to know about the gases that the incinerator will produce.

A- One of the things that EPA evaluates in any proposed incineration project or one that we are implementing, is the destruction and removal efficiency of that incinerator unit. We do this through trial burns in which the incinerator has to meet very stringent standards so that any gasses that are released are not toxic to the surrounding community. We are talking about the demonstration of a removal efficiency of 99.9999 percent of any hazardous elements in the waste to be incinerated, prior to actual on-line operation of the incinerator. Your concern about the gasses is one that EPA shares; we are very sensitive about making sure that we do not move a problem from one medium to another, for example, from the soil to the air. We do believe that with careful operation and monitoring of the incinerator, we can ensure that this will not occur.

Q- Whose regulations/standards are those?

A- Both EPA and State regulations for the destruction and removal efficiency for the stack gasses that are emitted. You heard the term ARARs, or applicable or relevant and appropriate standards, mentioned earlier; in this case air emission standards and destruction and removal efficiency are ARARs.

Comment- I thought North Carolina's air safety standards were practically nonexistent.

A- We will follow the more stringent standard, in this case EPA's, as the applicable regulation.

Q- Is there a problem with building an incinerator, or does it have to be licensed?

A- Issuance of a permit or license will not be necessary because the proposed incinerator is to be neither a commercial facility which would accept off-site waste, nor is it to be permanent. Although it will not be handled as a permitting or licensing action, the facility will, however, have to meet the technical requirements of Federal and State regulations.

Comment- There is so much turmoil in North Carolina right now concerning the siting of incinerators around the state. Many counties are rejecting them; they do not want incinerators as economic enterprises and here we are about to have a private one right in our own community.

Response- We are well aware of North Carolina's situation and it is one that is not unique to this state. We do see a difference in this case, however, between permitting a long-term, permitted, commercial incinerator facility and a short-term incinerator to deal with a specific problem for a specific time. When the problem is resolved, the incinerator will be moved; it is a mobile unit, not a dedicated facility.

The Congress has chosen to mandate that, wherever possible, EPA is to address problems created by Superfund sites where those problems are located. In other words, if we can deal with them on-site, we are to do so. Although we are aware of the concern about incineration throughout North Carolina, we have been told

> clearly by the Congress to deal with this problem in a forthright manner on-site if we can. Yours is the kind of comment, however, that is appropriate for us to receive during the public comment period and consider.

No other questions or comments were expressed at the meeting. For further detail and clarification on all comments raised during the meeting, interested persons can refer to the public meeting transcript.

The comment period on the Feasibility Study started on February 16, 1989 (the day of the public meeting) and closed on March 9, 1989. The only comments received were from Hoechst Celanese on the Agency's preferred alternative. It should be noted the preferred alternative was taken directly from the draft Feasibility Study report developed by S & ME for Celanese. The following comments are portions of the letter submitted by Hoechst Celanese. The letter in its entirety is included as part of the Administrative Record at the site. The major comments from the letter are as follows:

1. Comment

   Summary

   Based on the findings of the RI Report and expanded Characterization Study, it was determined that there were 1800 cubic yards of GRU/dirt material, 1800 cubic yards of burn pit residues and soils, and 110 cubic yards of stream sediments requiring remediation at our site. The FS Report presented several remedial options to these source materials, with incineration of the GRU material (the major source of organic contamination) appearing to be the most amenable approach to remediation. The FS, however, did not clearly depict whether on-site or off-site was more viable. Because of this, Hoechst Celanese began to closely examine on-site/off-site incineration and requested budgetary estimates from several hazardous material response and disposal operations. Based on this examination, off-site incineration of the GRU/dirt material and off-site landfilling of the burn pit residues, soils and stream sediments are the most beneficial approaches to remediation at the Hoechst Celanese - Shelby site.

   Recommendation

   Incineration of the GRU/dirt material is an amenable proven technology and provides a permanent solution in that all organic components are destroyed. Disposal of the burn pit residues, soils and stream sediments at a secure hazardous waste landfill is recommended as these materials are not technically amenable to thermal treatment and the organic content is relatively low. More importantly, the off-site disposal benefits over on-site are believed to be critical to the timely and positive execution of this action. These benefits are: 1) timely start and completion, 2) positive community acceptance, 3) disposal occurs at an established and proficient facility, 4) minimal delay causing variables, and 5) it is more economical.

EPA Response

The Agency agrees incineration of the GRU/dirt material is the most viable alternative. However, based on the analysis provided in this ROD, the Agency believes on-site incineration with solidification of the incinerator ash and other contaminated materials is the most effective alternative for this site.

For purposes of discussion, each benefit identified in the company's recommendation is presented separately, and the Agency's response follows:

2. Timeliness: It is expected that off-site incineration and off-site landfilling could be initiated within three months after the ROD is approved. The only potential regulatory requirement is TSD State approval, and should present little problem based on the analyses of the disposal materials. The time to complete the excavation and ship all the source materials to off-site facilities would probably be less than 6 to 12 months based on discussions with TSD facilities and hazardous material response operations.

   The time frame for on-site incineration of the GRU/dirt material and on-site fixation of the non-GRU materials and ash is much more variable and could take up to 30 months to complete, assuming a contract mobile incinerator is available for the site. It is anticipated to take at least a year to mobilize an incinerator and complete all permitting requirements, including test burns and analytical evaluation of the off-gasses. After the incineration portion of the project is complete, the ash and non-GRU materials would have to be encapsulated using additional equipment brought on-site; this would probably account for 5 to 6 months of the job duration assuming extensive analytical evaluations are not required.

   The timeliness of off-site incineration over on-site is in keeping with the President's Superfund improvement program requesting faster clean-ups of CERCLA sites.

   EPA Response: The time frame given for on-site incineration is unrealistic. Some small quantity incinerators can be mobilized in as little as two days. Incineration of the GRU sludges would take approximately three months. The solidification of the ash and other contaminated materials should require no more than a month including mobilization. Solidification at another Superfund site required only two months from mobilization to de-mobilization in solidifying more than 6,600 cubic yards of material. Considering this material has been in place for approximately 30 years and the extraction wells are situated in such a way as to intercept contaminants migrating from the source, timeliness in this context is not a serious concern.

3. Neighborhood Impact: Because off-site remediation can be accomplished much more quickly than on-site, the community impact with respect to possible air emissions, noise, and odors from the excavated areas will be much less. The potential risk for contaminant release due to off-site transportation accidents is minimal considering the characteristics of the source materials and the use of licensed hazardous waste transporters.

   The noise associated with the on-site operation of an incinerator would be 24 hours around the clock, as the operation cannot be easily started and stopped. In addition, the reburying of encapsulated residuals may not be perceived by the community as an adequate elimination of the contamination source.

   EPA Response: A public meeting was held in Shelby on February 16, 1989. Only three members of the local community attended. All the feasible remedial alternatives were presented, and the Agency presented a preferred alternative. These residents had only three questions and appeared to be satisfied by the answers given by the Agency. No written or verbal comments were submitted by anyone but the company. The Agency, therefore, feels that the public has no objection to the on-site incineration alternative. The Agency will, however, make every effort to minimize any potential nuisance or impact to the local community.

4. Efficiency and Effectiveness of Commercial Disposal Facilities: Commercial RCRA incinerators blend a variety of waste materials along with supplementary fuels to assure a consistent feed to the unit. With a mobile incinerator, the incoming wastes would be expected to be much more variable, particularly when burning GRU/dirt mixtures, thus requiring much greater expertise and attention to achieve the required destruction efficiency. Also, off-site RCRA incineration facilities are readily available and South Carolina's Executive Order 89-03 does not apply to in-State incineration facilities.

   Source removal to a secure landfill assures that the Shelby site groundwater will be protected from any possible further degradation, and that the property can be utilized without future restriction once remediation is complete. RCRA landfills are fully equipped with double liners, double leachate collection and groundwater monitoring systems, to assure long-term protection of the groundwater. These facilities also have deed restrictions which prevent future use of the land that would compromise the integrity of the containment.

   Although encapsulation should chemically bind all hazardous constituents in the soils and residuals, there is enough doubt to require groundwater monitoring of the burial area indefinitely.

More importantly, the presence of the encapsulated residuals would not allow development of the property in or near the burial area, either for Hoechst Celanese expansions or subsequent owners, and would require long-term maintenance.

EPA Response: Companies contracting to provide mobile incinerators provide the necessary experienced and properly trained personnel to assure proper operation of the equipment.

The Shelby site groundwater will be protected if any remedial action other than the No Action alternative is chosen. Additionally, disposal of contaminated materials at a RCRA Subtitle C facility is considered less than permanent, since facility containment structures are subject to failure.

5. Minimal Delay Causing Variables: In addition to time delaying RCRA requirements associated with an on-site incinerator identified earlier, there are other delay causing variables associated with on-site remediation. These include more extensive monitoring and analytical programs and the development of more elaborate operational, health and safety, contingency, and closure plans specific to on-site remediation than would be required for source removal only. The procurement of an air permit and petition to delist the by-products from the incinerator is anticipated to take at least 4 months. There are also many undefined construction activities such as utilities supplies for the operation of an incinerator and water treatment of incinerator scrubber effluent. (The groundwater treatment system has not been designed to handle this additional load.) In addition, long-term surface water handling and unforeseen maintenance problems could greatly delay operations.

   On-site remediation would also be a greater disruption to unrelated routine operations at the plant.

   EPA Response: Any potential "delay causing variables" should be anticipated in the design and their possible impacts on the schedule minimized. Careful and thorough planning should reduce any potential delays. Delays due to "undefined construction activities" or "disruption(s) to unrelated routine operations at the plant" would have to be more clearly defined in order to determine what impact if any they would have on the project schedule.

6. Economics: Attachments to the letter summarize the budgetary estimates received to-date concerning off-site incineration of the GRU/dirt material with off-site landfill disposal of residuals, and concerning on-site incineration with chemical fixation of residuals and ash. Attached to each summary is the vendor's proposal. The following is a summary of the remedial action costs:

Vendor	Location	Cost in $1000's	
GSX Services, Inc.	Off-site	750	(turn-key)
Chemical Waste Management	On-site	1,630	(1)
Chemical Waste Management	Off-site	1,546	(turn key)
ENSCO	On-site	5,170	(1 and 2)
ENSCO	Off-site	3,132	(2)
ThermalKEM	Off-site	1,800	(2)

1- Does not include Hoechst Celanese's additional costs of $500,000 to $750,000 to accommodate on-site remediation activities over and above off-site.

2- Does not include remediation of non-GRU materials or site excavation activities.

Based on these budgetary estimates, significant cost savings can be realized through off-site disposal using GSX or Chemical Waste Management. Reference the attachments for details of the remedial approach of each vendor.

EPA Response: None of the estimates provided the Agency subsequent the draft Feasibility Study Report contain enough detail to be considered as valid estimates. The draft Feasibility Study Report offered detailed cost estimates for each alternative (Appendix IX of the Feasibility Study report). Estimates provided by Hoechst Celanese since the draft Feasibility Study report was submitted have been vague, usually appearing as letters to the company with little or no detail as to how the estimates were developed.

Clarification of the $500,000 to $750,000 required by the company to "accommodate" on-site remediation has not been received. This accommodation expense is provided with no supporting documentation and therefore must be disregarded as unsubstantiated.

7. Conclusion: The two remedial alternatives presented in the FS Report that appeared most attractive were on-site incineration with on-site fixation, and off-site incineration with off-site landfill disposal of the soils and sediments. After closer evaluation of these alternatives, Hoechst Celanese recommends off-site incineration of the GRU materials and off-site landfill disposal of the contaminated soils and sediments as the preferred alternative. The major benefits of this approach, as outlined in the preceding discussion, are believed to be of considerable advantage over on-site remediation.

EPA Response: The Agency's evaluation of all the alternatives as presented in the draft Feasibility Study Report developed by S & ME, Inc., for Hoechst Celanese, resulted in selection of the alternative presented in the ROD. The information submitted by Hoechst Celanese during the public comment period has been considered; however, no new useable information was submitted, therefore the Agency's preferred alternative remains on-site incineration with solidification of the incinerator ash, burn pit residuals and polyester chip.

IV. REMAINING CONCERNS

The only remaining concern at the site is that the incineration be conducted in a safe manner. In addition, the Hoechst Celanese Company prefers to have the incineration occur off-site.

ATTACHMENT

2.0 ADMINISTRATIVE RECORD INDEX

CELANESE CORP SHELBY FIBER OPERATIONS
(OPERABLE UNIT 2)

NPL Site Administrative Record

Index

DRAFT

As of March 2, 1989

Prepared for

Region IV
Waste Management Division
U.S. Environmental Protection Agency

With Assistance from

LABAT-ANDERSON, INCORPORATED
1111 North 19th Street, Suite 2200 ■ Arlington, Virginia 22209 ■ (703) 525-9400

CELANESE CORP SHELBY FIBER OPERATIONS
(OPERABLE UNIT 2)

NPL SITE ADMINISTRATIVE RECORD

NOTE

ALL DOCUMENTS PRIOR TO
CEL-003-0594 CAN BE FOUND IN
THE OCTOBER 6, 1988
ADMINISTRATIVE RECORD FOR
OPERABLE UNIT 1

Document Number: CEL-001-0271 To 0272 Date: 01/08/86

Title: (Memo forwarding final Community Relations Plan for the site with list of addressee's also attached)

Type: CORRESPONDENCE
Author: Anderson, Meredith Clarke: US EPA
Recipient: none: none
Attached: CEL-001-0273

Document Number: CEL-001-0622 To 0623 Date: 03/21/86

Title: (Memo summarizing community relations activities to date)

Type: CORRESPONDENCE
Author: Anderson, Meredith Clarke: US EPA
Recipient: none: none

Document Number: CEL-001-0700 To 0700 Parent: CEL-001-0653 Date: 03/05/86

Title: Work Assignment Cover Sheet

Type: OTHER
Author: Anderson, Meredith Clarke: US EPA
Recipient: none: none

Document Number: CEL-003-1865 To 1894 Parent: CEL-003-1490 Date: / /

Title: Appendix VI Westinghouse Incineration Report

Type: PLAN
Author: Bachovchin, D M: Westinghouse
Recipient: none: none

Document Number: CEL-001-0640 To 0643 Date: 04/08/86

Title: (Memo summarizing work completed during 03/00/86)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0734 To 0734 Parent: CEL-001-0701 Date: 01/10/87

Title: (Letter summarizing work completed during 12/00/86)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-[illegible]-0751 To 0752 Date: 04/24/87

Title: (Letter forwarding to Volume I and II of draft RI with comments from EPA)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-001-0753 CEL-001-0801 CEL-001-0805

Document Number: CEL-002-0001 To 0283
Date: 06/01/87

Title: Final Remedial Investigation Report Volume I - Text, Tables and Figures

Type: PLAN
Condition: MARGINALIA
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0284 To 0776
Date: 06/01/87

Title: Final Remedial Investigation Report, Appendix Volume I, Appendix A through O

Type: PLAN
Condition: MARGINALIA
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-002-0289 CEL-002-0290 CEL-002-0305 CEL-002-0306 CEL-002-0307 CEL-002-0308 CEL-002-0311
CEL-002-0312 CEL-002-0327 CEL-002-0328 CEL-002-0332 CEL-002-0337 CEL-002-0339 CEL-002-0340
CEL-002-0342 CEL-002-0344 CEL-002-0348 CEL-002-0351 CEL-002-0355 CEL-002-0357 CEL-002-0359
CEL-002-0361 CEL-002-0363 CEL-002-0365 CEL-002-0366 CEL-002-0368 CEL-002-0370 CEL-002-0371
CEL-002-0372 CEL-002-0373 CEL-002-0374 CEL-002-0375

Document Number: CEL-002-0351 To 0354 Parent: CEL-002-0284 Date: 04/08/86

Title: (Letter summarizing 03/00/86 Status Report)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0370 To 0370 Parent: CEL-002-0284 Date: 01/10/86

Title: (Letter summarizing work completed during 12/00/86 and planned activities for 01/00/87)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0777 To 1099
Date: 06/22/87

Title: Final Remedial Investigation Report Appendix Volume II Appendix P Through S

Type: PLAN
Condition: MARGINALIA
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-002-1100 CEL-002-1451 CEL-002-1452 CEL-002-1453 CEL-002-1454 CEL-002-1456 CEL-002-1622

Document Number: CEL-001-0157 To 0157 Parent: CEL-001-0075 Date: 10/04/85

Title: (Memo accepting draft work plan and asking to review the project sampling plan)

Type: CORRESPONDENCE
Author: Bokey, William R: US EPA
Recipient: none: none

61

Document Number: CEL-003-0002 To 0002
Date: 11/12/87

Title: (Letter forwarding Final Report "Transcript of the Public Meeting - Celanese Fibers Operations Site, Remedial Investigation")

Type: CORRESPONDENCE
Author: Butler, Harry P: Camp Dresser & McKee (CDM)
Recipient: none: none
Attached: CEL-003-0003

Document Number: CEL-003-1947 To 1948
Date: 02/08/89

Title: (Letter supporting Hoechst Celanese's recommended remedial approach to Operable Unit Two)

Type: CORRESPONDENCE
Author: Caldwell, Ron E: Celanese Corporation
Recipient: none: none
Attached: CEL-003-1949

Document Number: CEL-003-1949 To 1953 Parent: CEL-003-1947 Date: 01/18/89

Title: (State of South Carolina Executive Order No. 89-03 concerning hazardous waste treatment and disposal facilities in the State)

Type: LEGAL DOCUMENT
Author: Campbell, Carroll A, Jr: SC, State of
Recipient: none: none

Document Number: CEL-003-0583 To 0593 Parent: CEL-003-0582 Date: 07/20/88

Title: Health Assessment for Celanese Fibers Operation NPL Site

Type: PLAN
Author: Carter, Chebryll J: US Dept of Health & Human Services
Recipient: none: none

Document Number: CEL-001-0297 To 0297
Date: 01/21/86

Title: (Letter attaching the Final Project Operations Plan for the site)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-001-0296 CEL-001-0533

Document Number: CEL-001-0707 To 0708 Parent: CEL-001-0701 Date: 08/08/86

Title: (Letter summarizing work completed during 07/00/86)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0357 To 0358 Parent: CEL-002-0284 Date: 06/05/86

Title: (Letter presenting 05/00/86 Status Report)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0359 To 0360 Parent: CEL-002-0284 Date: 07/07/86

Title: (Letter presenting 06/00/86 Status Report)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0361 To 0362 Parent: CEL-002-0284 Date: 08/08/86

Title: (Letter summarizing work completed during 07/00/86)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0001 To 0001 Date: 06/01/85

Title: (Letter enclosing Draft Final Report for the site)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Clarke, Meredith L: US EPA
Recipient: none: none

Document Number: CEL-001-0150 To 0156 Parent: CEL-001-0075 Date: 10/04/85

Title: (Memo submitting comments to incorporate in the Final Work Plan)

Type: CORRESPONDENCE
Author: Clarke, Meredith L: US EPA
Recipient: none: none

Document Number: CEL-003-1895 To 1901 Parent: CEL-003-1490 Date: 10/12/88

Title: Appendix VII University of Central Florida Incineration Report

Type: PLAN
Author: Clausen, Christian: University of Central Florida
Recipient: none: none

Document Number: CEL-001-0635 To 0635 Parent: CEL-001-0634 Date: 03/29/86

Title: (Newspaper article titled: "Soil and Water Sampling completed at Celanese Dumps")

Type: CORRESPONDENCE
Author: Clemmer, Donna: Shelby Star
Recipient: none: none

Document Number: CEL-001-0647 To 0647 Parent: CEL-001-0646 Date: 04/11/86

Title: (Newspaper article titled: "Drinking Wells to Be Tested Again")

Type: CORRESPONDENCE
Author: Clemmer, Donna: Shelby Star
Recipient: none: none

Document Number: CEL-003-1961 To 1961 Date: 02/11/89

Title: "EPA to Address Cleanup of Hazardous Waste Site" (article from The Shelby Star newspaper)

Type: NEWS CLIPPING
Author: Clemmer, Donna: Shelby Star
Recipient: none: none

Document Number: CEL-001-0166 To 0167 Parent: CEL-001-0075 Date: 09/28/85

Title: (Handwritten letter enclosing a list of questions and concerns)

Type: CORRESPONDENCE
Author: Cooper, Jay B: resident
Recipient: none: none

Document Number: CEL-003-0508 To 0509 Date: 03/23/88

Title: Declaration for the Enforcement Record of Decision

Type: LEGAL DOCUMENT
Author: DeHihns, Lee A: US EPA
Recipient: none: none
Attached: CEL-003-0510

Document Number: CEL-001-0592 To 0592 Date: 02/17/86

Title: (Memo describing Site Visit Trip Report on 02/11/86 and sampling sites)

Type: CORRESPONDENCE
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: none: none
Attached: CEL-001-0593

Document Number: CEL-001-0593 To 0593 Parent: CEL-001-0592 Date: 02/11/86

Title: Sample Analyses Request (for Gene Bettis property)

Type: DATA
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: none: none

Document Number: CEL-001-0638 To 0639 Date: 03/26/86

Title: Sample Analyses Request (from Bettis property)

Type: DATA
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: none: none

Document Number: CEL-001-0644 To 0644 Date: 04/09/86

Title: (Memo describing site inspection on 03/26/86)

Type: CORRESPONDENCE
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: none: none

Document Number: CEL-001-0648 To 0649 Date: 04/15/86

Title: (Cover letter enclosing site reports and results of inorganic analyses of well and surface water sampling)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: none: none

Document Number: CEL-001-0268 To 0268 Date: 12/06/85

Title: (Certified letter approving Work Plan by Soil and Material Engineers dated 11/01/85)

Type: CORRESPONDENCE
Author: Devine, Thomas W: US EPA
Recipient: none: none

Document Number: CEL-003-1937 To 1937 Parent: CEL-003-1935 Date: 01/18/89

Title: (Letter estimating costs for remedial services)

Type: CORRESPONDENCE
Author: Dukes, Robert D: GSX Services, Inc.
Recipient: none: none

Document Number: CEL-003-1932 To 1934 Date: 01/11/89

Title: (Cover letter transmitting the final draft Feasibility Study Report)

Type: CORRESPONDENCE
Author: Glenn, Michelle: US EPA
Recipient: none: none

Document Number: CEL-003-1954 To 1954 Date: 02/09/89

Title: (Letter rejecting Hoechst Celanese's preference for off-site incineration)

Type: CORRESPONDENCE
Author: Glenn, Michelle: US EPA
Recipient: none: none

Document Number: CEL-001-0076 To 0077 Parent: CEL-001-0075 Date: 11/01/85

Title: (Memo attaching the revised work plan for the site and asking for a response)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0269 To 0270 Date: 12/12/85

Title: (Letter summarizing activities at the site during 11/00/85)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0294 To 0295
Date: 01/16/86

Title: (Memo presenting Status report for the month of 12/00/85)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0588 To 0591
Date: 02/11/86

Title: (Letter summarizing the work on the CPO/Shelby RI/FS for the month of 01/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0594 To 0596
Date: 03/04/86

Title: (Letter describing work on the RI/FS at the site during the month of 02/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0701 To 0702
Date: 05/06/86

Title: (Letter summarizing work completed on the RI/FS during 04/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-001-0704 CEL-001-0707 CEL-001-0709 CEL-001-0711 CEL-001-0732 CEL-001-0734

Document Number: CEL-001-0704 To 0705
Parent: CEL-001-0701
Date: 06/05/86

Title: (Letter summarizing work completed during 05/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0709 To 0710
Parent: CEL-001-0701
Date: 09/10/86

Title: (Letter summarizing work completed during 08/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0711 To 0711
Parent: CEL-001-0701
Date: 10/10/86

Title: (Letter summarizing work completed during 09/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0732 To 0733 Parent: CEL-001-0701 Date: 12/09/86

Title: (Letter summarizing work completed during 11/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0735 To 0735 Date: 02/09/87

Title: (Letter summarizing work completed during 01/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-001-0748 CEL-001-0750 CEL-001-0811

Document Number: CEL-001-0748 To 0748 Parent: CEL-001-0735 Date: 03/06/87

Title: (Letter summarizing work completed during 02/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0750 To 0750 Parent: CEL-001-0735 Date: 04/10/87

Title: (Letter summarizing work completed on the RI/FS during 03/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0753 To 0805 Parent: CEL-001-0751 Date: 05/01/87

Title: Final Feasibility Study Work Plan Celanese Fibers Operations Shelby, NC

Type: PLAN
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0811 To 0811 Parent: CEL-001-0735 Date: 05/11/87

Title: (Letter summarizing work completed during 04/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-[illegible]-0342 To 0343 Parent: CEL-002-0284 Date: 01/16/86

Title: (Letter summarizing work performed during 12/00/85)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0344 To 0347 Parent: CEL-002-0284 Date: 02/11/86

Title: (Letter summarizing work during 01/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0348 To 0350 Parent: CEL-002-0284 Date: 03/04/86

Title: (Letter presenting 02/00/86 Status Report)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0355 To 0356 Parent: CEL-002-0284 Date: 04/08/86

Title: (Letter providing 04/00/85 Status Report)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0363 To 0364 Parent: CEL-002-0284 Date: 09/10/86

Title: (Letter summarizing work completed during 08/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0365 To 0365 Parent: CEL-002-0284 Date: 10/10/86

Title: (Letter summarizing work completed during 09/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0366 To 0367 Parent: CEL-002-0284 Date: 11/10/86

Title: (Letter summarizing work completed during 10/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0368 To 0369 Parent: CEL-002-0284 Date: 12/09/86

Title: (Letter summarizing work completed during 11/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0371 To 0371 Parent: CEL-002-0284 Date: 02/09/87

Title: (Letter summarizing work completed during 01/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0372 To 0372 Parent: CEL-002-0284 Date: 03/06/87

Title: (Letter summarizing work completed during 02/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0373 To 0373 Parent: CEL-002-0284 Date: 04/10/84

Title: (Letter summarizing work completed during 03/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0374 To 0374 Parent: CEL-002-0284 Date: 05/10/87

Title: (Letter summarizing work completed during 04/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0375 To 0376 Parent: CEL-002-0284 Date: 06/09/87

Title: (Letter summarizing work completed during 05/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-003-1939 To 1939 Date: 02/08/89

Title: (Letter transmitting the Operable Unit Two Feasibility Study and Proposed Plan Fact Sheet)

Type: CORRESPONDENCE
Author: Hallahan, Frances: Camp Dresser & McKee (CDM)
Recipient: none: none
Attached: CEL-003-1940

Document Number: CEL-0[illegible]-0117 To 0507 Date: 02/26/88

Title: Final Feasibility Study Report Operable Unit I - Groundwater Public Health Assessment for Celanese Fibers Operations

Type: PLAN
Author: Hardie, Michael G: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CKL-002-0371 To 0371 Parent: CKL-002-0284 Date: 02/09/87

Title: (Letter summarizing work completed during 01/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CKL-002-0372 To 0372 Parent: CKL-002-0284 Date: 03/06/87

Title: (Letter summarizing work completed during 02/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CKL-002-0373 To 0373 Parent: CKL-002-0284 Date: 04/10/84

Title: (Letter summarizing work completed during 03/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CKL-002-0374 To 0374 Parent: CKL-002-0284 Date: 05/10/87

Title: (Letter summarizing work completed during 04/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CKL-002-0375 To 0376 Parent: CKL-002-0284 Date: 06/09/87

Title: (Letter summarizing work completed during 05/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CKL-003-1939 To 1939 Date: 02/08/89

Title: (Letter transmitting the Operable Unit Two Feasibility Study and Proposed Plan Fact Sheet)

Type: CORRESPONDENCE
Author: Hallahan, Frances: Camp Dresser & McKee (CDM)
Recipient: none: none
Attached: CKL-003-1940

Document Number: CKL-003-0117 To 0507 Date: 02/26/88

Title: Final Feasibility Study Report Operable Unit I - Groundwater Public Health Assessment for Celanese Fibers Operations

Type: PLAN
Author: Hardie, Michael G: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-002-0307 To 0307 Parent: CEL-002-0284 Date: 10/12/83

Title: (Letter forwarding Permit #7241R dated 10/12/83 and shall void #7241)

Type: CORRESPONDENCE
Author: Helms, Robert F: NC Dept of Natural Resources & Community Development
Recipient: none: none

Document Number: CEL-002-0308 To 0310 Parent: CEL-002-0284 Date: 10/12/83

Title: Permit for the Discharge of Sewage, Industrial Wastes, or Other Wastes

Type: LEGAL DOCUMENT
Author: Helms, Robert F: NC Dept of Natural Resources & Community Development
Recipient: none: none

Document Number: CEL-001-0273 To 0293 Parent: CEL-001-0271 Date: 01/01/86

Title: Community Relations Plan for Celanese Fibers Operations Site Shelby, NC

Type: PLAN
Author: Henderson, H Michael: US EPA
Recipient: none: none

Document Number: CEL-001-0713 To 0730 Date: 10/23/86

Title: (Memo attaching Region IV data on split samples)

Type: CORRESPONDENCE
Author: Hoopoer, Charlie: US EPA
Recipient: none: none

Document Number: CEL-001-0164 To 0165 Parent: CEL-001-0075 Date: 08/30/85

Title: (Handwritten letter commenting on the meeting between EPA and Celanese and asking for EPA to "be Celanese's conscience and watch dog")

Type: CORRESPONDENCE
Author: Lavender, Jackie: Celanese Corporation
Recipient: none: none

Document Number: CEL-001-0636 To 0637 Date: 04/07/86

Title: (Letter confirming 04/04/86 telephone conversation regarding RI/FS Program at the site)

Type: CORRESPONDENCE
Author: Larme, J A: Celanese Corporation
Recipient: none: none

Document Number: CEL-001-0162 To 0163 Parent: CEL-001-0075 Date: 09/24/85

Title: (Letter summarizing comments on the Draft Work Plan for the site)

Type: CORRESPONDENCE
Author: Link, Donald R: NC Dept of Natural & Economic Resources
Recipient: none: none

Document Number: CEL-003-1940 To 1946   Parent: CEL-003-1939   Date: 02/08/89

Title: Operable Unit Two Feasibility Study and Proposed Plan Fact Sheet - Celanese Fibers Operations Site - Cleveland County, North Carolina

Type: PLAN
Author: Lloyd, Sharon L: Booz Allen & Hamilton
Recipient: none: none

Document Number: CEL-003-1957 To 1957   Date: 02/10/89

Title: (Example of letter sent to media transmitting a public meeting announcement and Fact Sheet)

Type: CORRESPONDENCE
Author: Lloyd, Sharon L: Booz Allen & Hamilton
Recipient: none: none
Attached: CEL-003-1958 CEL-003-1960

Document Number: CEL-003-0003 To 0111   Parent: CEL-003-0002   Date: 07/21/87

Title: Final Report - Transcript of the Public Meeting - Celanese Fibers Operations Site Remedial Investigation

Type: PLAN
Author: Loyld, Sharon L: Booz Allen & Hamilton
Recipient: none: none

Document Number: CEL-001-0584 To 0587   Date: 02/07/86

Title: (Memo reporting on meeting held on 01/30/86 concerning sampling and analytical program for remedial investigation)

Type: CORRESPONDENCE
Author: Lucia, Shirley: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0712 To 0712   Date: 10/14/86

Title: (Memo confirming a conversation regarding the submittal of the Feasibility Study)

Type: CORRESPONDENCE
Author: Lucia, Shirley: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-001-0812 To 0812   Date: 05/14/87

Title: (Letter concerning the meeting to discuss responses to comments for the RI report and submittal of Final RI report)

Type: CORRESPONDENCE
Author: Lucia, Shirley: Soil & Material Engineers (S&ME)
Recipient: none: none

Document Number: CEL-003-1935 To 1938   Date: 02/07/89

Title: (Letter submitting comments on the Feasibility Study Report)

Type: CORRESPONDENCE
Author: Mayrose, W C: Celanese Corporation
Recipient: none: none
Attached: CEL-003-1937

Document Number: CEL-003-0594 To 1107
Date: 01/01/89

Title: Final Feasibility Study Report - Operable Unit 2 - Source Material - Hoechst Celanese Facility, Shelby, North Carolina - Volume 1: Text, Appendices I Through III

Type: PLAN
Author: Mays, Michael K: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-003-0786 CEL-003-0804 CEL-003-0818

Document Number: CEL-003-1108 To 1489
Date: 01/01/89

Title: Final Feasibility Study Report - Operable Unit 2 - Source Material - Hoechst Celanese Facility, Shelby, North Carolina - Volume 2: Appendices, Appendices IV, A Through C

Type: PLAN
Author: Mays, Michael K: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-003-1109 CEL-003-1210 CEL-003-1220 CEL-003-1336

Document Number: CEL-003-1490 To 1931
Date: 01/01/89

Title: Final Feasibility Study Report - Operable Unit 2 - Source Material - Hoechst Celanese Facility, Shelby, North Carolina - Volume 3: Appendices, Appendices IV, D and E, V Through IX

Type: PLAN
Author: Mays, Michael K: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-003-1491 CEL-003-1841 CEL-003-1847 CEL-003-1865 CEL-003-1895 CEL-003-1902 CEL-003-1914

Document Number: CEL-001-0806 To 0810
Date: 08/27/87

Title: (Letter explaining an error made on original Form 1 for sample GW-017)

Type: CORRESPONDENCE
Author: McCord, John H: Davis & Floyd
Recipient: none: none

Document Number: CEL-002-1452 To 1452
Parent: CEL-002-0777
Date: 11/10/86

Title: (Letter enclosing final data on project #1175-85-1050A)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: McCord, John H: Davis & Floyd
Recipient: none: none

Document Number: CEL-002-1453 To 1453
Parent: CEL-002-0777
Date: 11/10/86

Title: (Letter listing corrections/additions for letter dated 10/23/86)

Type: CORRESPONDENCE
Author: McCord, John H: Davis & Floyd
Recipient: none: none

Document Number: CEL-002-1454 To 1455　Parent: CEL-002-0777　Date: 10/23/86

Title: (Letter stating that all laboratory analyses conducted by Davis & Floyd, Inc and Triangle Lab is complete with list of deficiencies in analytical results)

Type: CORRESPONDENCE
Author: McCord, John H: Davis & Floyd
Recipient: none: none

Document Number: CEL-001-0731 To 0731　Date: 10/31/86

Title: (Letter enclosing various site reports and results of inorganic analyses of well and surface water samples)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Moore, Ben: US EPA
Recipient: none: none

Document Number: CEL-001-0736 To 0736　Date: 02/12/87

Title: (Letter enclosing status reports from 10/00/86 to 02/00/87 and Feasibility Study Work Plan)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Moore, Ben: US EPA
Recipient: none: none

Document Number: CEL-001-0737 To 0737　Date: 02/12/87

Title: (Letter enclosing status reports and Feasibility Study work Plan for repository)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Moore, Ben: US EPA
Recipient: none: none

Document Number: CEL-001-0741 To 0747　Date: 02/28/87

Title: (Letter providing comments on the Draft RI)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: none: none

Document Number: CEL-001-0801 To 0804　Parent: CEL-001-0751　Date: 12/11/85

Title: (Letter commenting on the Feasibility Study Work Plan)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: none: none

Document Number: CEL-001-0805 To 0805　Parent: CEL-001-0751　Date: 12/19/86

Title: (Letter with comment to add to list mailed on 12/11/86)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: none: none

Document Number: CEL-003-0001 To 0001 Date: 06/23/87

Title: (Memo announcing public meeting for 07/21/87)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: none: none

Document Number: CEL-001-0650 To 0651 Date: 04/30/86

Title: (Letter describing the overview site visit on 03/12/86)

Type: CORRESPONDENCE
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: none: none

Document Number: CEL-001-0652 To 0700 Parent: CEL-001-0653 Date: 05/07/86

Title: Remedial Investigation/Feasibility Study Oversight/Technical Support Work Plan for Celanese Fiber Operation Site Shelby, NC Volume I

Type: PLAN
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: none: none

Document Number: CEL-001-0653 To 0654 Date: 05/07/86

Title: (Cover letter forwarding Oversight and Technical Support Work Plan)

Type: CORRESPONDENCE
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: none: none
Attached: CEL-001-0652 CEL-001-0696 CEL-001-0700

Document Number: CEL-001-0696 To 0696 Parent: CEL-001-0653 Date: 03/28/86

Title: (Memo certifying no known conflict of interest associated with the work assignment)

Type: CORRESPONDENCE
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: none: none

Document Number: CEL-001-0168 To 0169 Parent: CEL-001-0075 Date: 10/02/85

Title: (Memo reviewing the Draft RI/FS Work Plan dated 08/20/85)

Type: CORRESPONDENCE
Author: Pietrosewicz, Casimar V: Agency for Toxic Substances & Disease Registry (ATSDR)
Recipient: none: none

Document Number: CEL-001-0739 To 0740 Date: 02/23/87

Title: (Memo presenting comments on the draft RI and Analytical Data Reports dated 1986)

Type: CORRESPONDENCE
Author: Pietrosewicz, Casimar V: Agency for Toxic Substances & Disease Registry (ATSDR)
Recipient: none: none

Document Number: CEL-003-0582 To 0582 Date: 07/27/88

Title: (Letter forwarding Health Assessment for site)

Type: CORRESPONDENCE
Author: Pietrosewicz, Casimar V: Agency for Toxic Substances & Disease Registry (ATSDR)
Recipient: none: none
Attached: CEL-003-0583

Document Number: CEL-002-0337 To 0337 Parent: CEL-002-0284 Date: 04/11/85

Title: (Memo attaching the final NPDES permit)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Pullen, James C: Celanese Corporation
Recipient: none: none

Document Number: CEL-001-0609 To 0609 Date: 03/10/86

Title: (Letter enclosing an executed copy of the Administrative Order for the site)

Type: CORRESPONDENCE
Author: Ravan, Jack E: US EPA
Recipient: none: none
Attached: CEL-001-0610

Document Number: CEL-001-0610 To 0621 Parent: L-001-0609 Date: 03/10/86

Title: Administrative Order on Consent

Type: LEGAL DOCUMENT
Author: Ravan, Jack E: US EPA
Recipient: none: none

Document Number: CEL-002-0290 To 0301 Parent: CEL-002-0284 Date: 03/10/86

Title: Administrative Order on Consent

Type: LEGAL DOCUMENT
Author: Ravan, Jack E: US EPA
Recipient: none: none

Document Number: CEL-001-0170 To 0170 Parent: CEL-001-0075 Date: / /

Title: (Memo reqesting to be on mailing list for information on site with handwritten note)

Type: CORRESPONDENCE
Author: Rhem, Donald P: resident
Recipient: none: none

Document Number: CEL-001-0003 To 0004 Date: 07/22/85

Title: (Cover letter submitting the Final Report)

Type: CORRESPONDENCE
Author: Roberts, John L: Camp Dresser & McKee (CDM)
Recipient: none: none
Attached: CEL-001-0002

Document Number: CEL-001-0533 To 0533 Parent: CEL-001-0297 Date: 07/22/85

Title: (Memo attaching Health and Safety Plan information)

Type: CORRESPONDENCE
Author: Ross, William E: Fiber Industries
Recipient: none: none

Document Number: CEL-002-0289 To 0289 Parent: CEL-002-0284 Date: 07/30/86

Title: (Memo forwarding Consent Agreement)

Type: CORRESPONDENCE
Author: Ross, William E: Fiber Industries
Recipient: none: none

Document Number: CEL-002-0306 To 0306 Parent: CEL-002-0284 Date: 04/19/83

Title: (Memo regarding request in letter dated 01/11/83 for Part B permit application)

Type: CORRESPONDENCE
Author: Ross, William E: Fiber Industries
Recipient: none: none

Document Number: CEL-002-0339 To 0339 Parent: CEL-002-0284 Date: 02/02/84

Title: (Letter reaffirming that company does not choose to file a Part B application)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Sellers, M D: Celanese Corporation
Recipient: none: none

Document Number: CEL-001-0624 To 0633 Date: / /

Title: CERCLA Quality Control Overview Report Celanese Fibers Shelby, NC

Type: PLAN
Author: Sloan, Fred: US EPA
Recipient: none: none

Document Number: CEL-001-0703 To 0703 Date: 05/16/86

Title: (Memo attaching overivew of sampling activities during 03/24/86 through 03/26/86)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Sloan, Fred: US EPA
Recipient: none: none

Document Number: CEL-001-0634 To 0634 Date: 03/31/86

Title: (Cover letter attaching a copy of a newspaper article dated 03/29/86)

Type: CORRESPONDENCE
Author: Spangler, Carl M: Celanese Corporation
Recipient: none: none
Attached: CEL-001-0635

Document Number: CEL-001-0646 To 0646 Date: 04/14/86

Title: (Letter attaching copy of article dated 04/11/86)

Type: CORRESPONDENCE
Author: Spangler, Carl M: Celanese Corporation
Recipient: none: none
Attached: CEL-001-0647

Document Number: CEL-002-0305 To 0305 Parent: CEL-002-0284 Date: 01/11/83

Title: (Letter requesting part B of application for hazardous waste facility for storage containers)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Strickland, O W: NC Dept of Human Resources
Recipient: none: none

Document Number: CEL-002-0340 To 0340 Parent: CEL-002-0284 Date: 09/17/84

Title: (Letter advising that plant has been denied a permit and all the implications)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Strickland, O W: NC Dept of Human Resources
Recipient: none: none

Document Number: CEL-001-0738 To 0738 Date: 02/18/87

Title: (Letter stating that there are no comments on the Feasibility Study Work Plan at this time)

Type: CORRESPONDENCE
Author: Swallow, June A: NC Dept of Human Resources
Recipient: none: none

Document Number: CEL-001-0749 To 0749 Date: 03/09/87

Title: (Letter explaining Superfund Amendments and Reauthorization Act of 1986 - SARA - and encouraging contact with EPA to discuss impact of SARA on site)

Type: CORRESPONDENCE
Author: Tobin, Patrick J: US EPA
Recipient: none: none

Document Number: CEL-001-0645 To 0645 Date: 04/09/86

Title: (Memo attaching a newspaper article)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Townsend, [illegible] D: US EPA
Recipient: none: none

Document Number: CEL-001-0597 To 0597 Date: 03/04/86

Title: (Memo attaching an overview of sampling activities during 02/05/86 and 02/06/86)

Type: CORRESPONDENCE
Author: Vick, Hugh C: US EPA
Recipient: none: none
Attached: CEL-001-0598

Document Number: CEL-002-0311 To 0311 Parent: CEL-002-0284 Date: 03/01/85

Title: (Letter forwarding NPDES permit)

Type: CORRESPONDENCE
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: none: none

Document Number: CEL-002-0312 To 0326 Parent: CEL-002-0284 Date: 03/01/85

Title: Permit to Discharge Wastewater Under the National Pollutant Discharge Elimination System

Type: LEGAL DOCUMENT
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: none: none

Document Number: CEL-002-0327 To 0327 Parent: CEL-002-0284 Date: 04/04/86

Title: (Letter forwarding Permit #3754R4 for discharge of air contaminants into atmosphere)

Type: CORRESPONDENCE
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: none: none

Document Number: CEL-002-0328 To 0331 Parent: CEL-002-0284 Date: / /

Title: Air Permit for the Discharge of Air Contaminants Into the Atmosphere

Type: LEGAL DOCUMENT
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: none: none

Document Number: CEL-002-0332 To 0336 Parent: CEL-002-0284 Date: 01/13/86

Title: (Letter forwarding modifications to the Permit #NC 004952)

Type: CORRESPONDENCE
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: none: none

Document Number: CEL-001-0706 To 0706 Date: 07/01/86

Title: (Memo describing 06/23/86 through 06/25/86 oversight insepection at site)

Type: CORRESPONDENCE
Author: Wilson, Charles H: Camp Dresser & McKee (CDM)
Recipient: none: none

Document Number: CEL-003-0786 To 0803 Parent: CEL-003-0594 Date: / /

Title: Appendix I Analytical Data

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-0804 To 0817 Parent: CEL-003-0594 Date: / /

Title: Appendix II Risk Assessment Data

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-0818 To 1107 Parent: CEL-003-0594 Date: 01/01/89

Title: Appendix III: Final Expanded Characterization Study - Glycol Recovery Unit Sludge and Burn Pit Area - Hoechst Celanese Facility, Shelby, North Carolina

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1109 To 1209 Parent: CEL-003-1108 Date: 01/01/89

Title: Appendix IV Final Treatability Study - Biological Treatment of the Glycol Recovery Unit Sludge - Hoechst Celanese Facility, Shelby, North Carolina

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1210 To 1219 Parent: CEL-003-1108 Date: / /

Title: Appendix A Photographs

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1220 To 1335 Parent: CEL-003-1108 Date: / /

Title: Appendix B Daily Logs

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1336 To 1489 Parent: CEL-003-1108 Date: / /

Title: Appendix C Microtox Results

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1491 To 1840 Parent: CEL-003-1490 Date: / /

Title: Appendix D Laboratory Analytical Data

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1841 To 1846 Parent: CEL-003-1490 Date: / /

Title: Appendix E Calculation Briefs

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1847 To 1864 Parent: CEL-003-1490 Date: / /

Title: Appendix V Wet Air Oxidation Report

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1902 To 1913 Parent: CEL-003-1490 Date: 11/11/88

Title: Appendix VIII Treatability Study Report

Type: PLAN
Author: none: KiBer Associates, Inc.
Recipient: none: none

Document Number: CEL-003-1914 To 1931 Parent: CEL-003-1490 Date: / /

Title: Appendix IX Alternative Cost Calculations

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1955 To 1955 Date: 02/09/89

Title: (Press release announcing a public meeting to be held on February 16, 1989)

Type: OTHER
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-1956 To 1956 Date: 02/09/89

Title: (Announcement of the February 16, 1989 public meeting from the Shelby Star)

Type: NEWS CLIPPING
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-1958 To 1959 Parent: CEL-003-1957 Date: 02/10/89

Title: (List of media representatives receiving copies of the public meeting announcement and the Fact Sheet)

Type: OTHER
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-1960 To 1960 Parent: CEL-003-1957 Date: 02/10/89

Title: (Announcement for the public meeting to be held February 16, 1989)

Type: OTHER
Author: none: US EPA
Recipient: none: none

CELANESE CORP SHELBY FIBER OPERATIONS
(OPERABLE UNIT 2)

NPL SITE ADMINISTRATIVE RECORD

NOTE

ALL DOCUMENTS PRIOR TO
CEL-003-0594 CAN BE FOUND IN
THE OCTOBER 6, 1988
ADMINISTRATIVE RECORD FOR
OPERABLE UNIT 1

Document Number: CEL-001-0001 To 0001
Date: 06/01/85

Title: (Letter enclosing Draft Final Report for the site)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Clarke, Meredith L: US EPA
Recipient: Simpson, Gary L: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0002 To 0074
Parent: CEL-001-0003
Date: 07/22/85

Title: Final Report Celanese Fibers Operations Site forward Planning Study

Type: PLAN
Author: none: Camp Dresser & McKee (CDM)
Recipient: none: US EPA

Document Number: CEL-001-0003 To 0004
Date: 07/22/85

Title: (Cover letter submitting the Final Report)

Type: CORRESPONDENCE
Author: Roberts, John L: Camp Dresser & McKee (CDM)
Recipient: Wright, Russell L: US EPA
Attached: CEL-001-0002

Document Number: CEL-001-0075 To 0263
Date: 11/01/85

Title: Work Plan Shelby Facility Celanese Fibers Operations Shelby, NC

Type: PLAN
Author: none: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-001-0076 CEL-001-0150 CEL-001-0157 CEL-001-0162 CEL-001-0164 CEL-001-0166 CEL-001-0168
CEL-001-0170

Document Number: CEL-001-0076 To 0077
Parent: CEL-001-0075
Date: 11/01/85

Title: (Memo attaching the revised work plan for the site and asking for a response)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0150 To 0156
Parent: CEL-001-0075
Date: 10/04/85

Title: (Memo submitting comments to incorporate in the Final Work Plan)

Type: CORRESPONDENCE
Author: Clarke, Meredith L: US EPA
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0157 To 0157
Parent: CEL-001-0075
Date: 10/04/85

Title: (Memo accepting draft work plan and asking to review the project sampling plan)

Type: CORRESPONDENCE
Author: Bokey, William R: US EPA
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0162 To 0163 Parent: CEL-001-0075 Date: 09/24/85

Title: (Letter summarizing comments on the Draft Work Plan for the site)

Type: CORRESPONDENCE
Author: Link, Donald R: NC Dept of Natural & Economic Resources
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0164 To 0165 Parent: CEL-001-0075 Date: 08/30/85

Title: (Handwritten letter commenting on the meeting between EPA and Celanese and asking for EPA to "be Celanese's conscience and watch dog")

Type: CORRESPONDENCE
Author: Lavender, Jackie: Celanese Corporation
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0166 To 0167 Parent: CEL-001-0075 Date: 09/28/85

Title: (Handwritten letter enclosing a list of questions and concerns)

Type: CORRESPONDENCE
Author: Cooper, Jay B: resident
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0168 To 0169 Parent: CEL-001-0075 Date: 10/02/85

Title: (Memo reviewing the Draft RI/FS Work Plan dated 08/20/85)

Type: CORRESPONDENCE
Author: Pietrosewicz, Casimer V: Agency for Toxic Substances & Disease Registry (ATSDR)
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0170 To 0170 Parent: CEL-001-0075 Date: / /

Title: (Memo reqesting to be on mailing list for information on site with handwritten note)

Type: CORRESPONDENCE
Author: Rhem, Donald F: resident
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0264 To 0267 Date: 12/01/85

Title: Fact Sheet

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: CEL-001-0268 To 0268 Date: 12/06/85

Title: (Certified letter approving Work Plan by Soil and Material Engineers dated 11/01/85)

Type: CORRESPONDENCE
Author: Devine, Thomas W: US EPA
Recipient: Engelman, Susan P: Celanese Corporation

Document Number: CEL-00I-0269 To 0270 Date: 12/12/85

Title: (Letter summarizing activities at the site during 11/00/85)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0271 To 0272 Date: 01/08/86

Title: (Memo forwarding final Community Relations Plan for the site with list of addressee's also attached)

Type: CORRESPONDENCE
Author: Anderson, Meredith Clarke: US EPA
Recipient: Crosby, Lee: NC Dept of Human Resources
Attached: CEL-001-0273

Document Number: CEL-001-0273 To 0293 Parent: CEL-001-0271 Date: 01/01/86

Title: Community Relations Plan for Celanese Fibers Operations Site Shelby, NC

Type: PLAN
Author: Henderson, H Michael: US EPA
Recipient: none: none

Document Number: CEL-001-0294 To 0295 Date: 01/16/86

Title: (Memo presenting Status report for the month of 12/00/85)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Anderson, Meredith Clarke: US EPA

Document Number: CEL-001-0296 To 0583 Parent: CEL-001-0297 Date: 01/21/86

Title: Final Project Operations Plan Celanese Fibers operations Facility Shelby, NC

Type: PLAN
Author: none: Soil & Material Engineers (S&ME)
Recipient: none: US EPA

Document Number: CEL-001-0297 To 0297 Date: 01/21/86

Title: (Letter attaching the Final Project Operations Plan for the site)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: Anderson, Meredith Clarke: US EPA
Attached: CEL-001-0296 CEL-001-0533

Document Number: CEL-001-0533 To 0533 Parent: CEL-001-0297 Date: 07/22/85

Title: (Memo attaching Health and Safety Plan information)

Type: CORRESPONDENCE
Author: Ross, William E: Fiber Industries
Recipient: Simpson, Gary L: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0584 To 0587
Date: 02/07/86

Title: (Memo reporting on meeting held on 01/30/86 concerning sampling and analytical program for remedial investigation)

Type: CORRESPONDENCE
Author: Lucia, Shirley: Soil & Material Engineers (S&ME)
Recipient: Anderson, Meredith Clarke: US EPA

Document Number: CEL-001-0588 To 0591
Date: 02/11/86

Title: (Letter summarizing the work on the CFO/Shelby RI/FS for the month of 01/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0592 To 0592
Date: 02/17/86

Title: (Memo describing Site Visit Trip Report on 02/11/86 and sampling sites)

Type: CORRESPONDENCE
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: file: none
Attached: CEL-001-0593

Document Number: CEL-001-0593 To 0593
Parent: CEL-001-0592
Date: 02/11/86

Title: Sample Analyses Request (for Gene Bettis property)

Type: DATA
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: none: none

Document Number: CEL-001-0594 To 0596
Date: 03/04/86

Title: (Letter describing work on the RI/FS at the site during the month of 02/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0597 To 0597
Date: 03/04/86

Title: (Memo attaching an overview of sampling activities during 02/05/86 and 02/06/86)

Type: CORRESPONDENCE
Author: Vick, Hugh G: US EPA
Recipient: Clarke, Meredith L: US EPA
Attached: CEL-001-0598

Document Number: CEL-001-0598 To 0608
Parent: CEL-001-0597
Date: / /

Title: Overview Report Celanese Fibers Shelby, NC

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: CEL-001-0609 To 0609 Date: 03/10/86

Title: (Letter enclosing an executed copy of the Administrative Order for the site)

Type: CORRESPONDENCE
Author: Ravan, Jack E: US EPA
Recipient: Engelman, Susan P: Celanese Corporation
Attached: CEL-001-0610

Document Number: CEL-001-0610 To 0621 Parent: CEL-001-0609 Date: 03/10/86

Title: Administrative Order on Consent

Type: LEGAL DOCUMENT
Author: Ravan, Jack E: US EPA
Recipient: none: none

Document Number: CEL-001-0622 To 0623 Date: 03/21/86

Title: (Memo summarizing community relations activities to date)

Type: CORRESPONDENCE
Author: Anderson, Meredith Clarke: US EPA
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0624 To 0633 Date: / /

Title: CERCLA Quality Control Overview Report Celanese Fibers Shelby, NC

Type: PLAN
Author: Sloan, Fred: US EPA
Recipient: none: none

Document Number: CEL-001-0634 To 0634 Date: 03/31/86

Title: (Cover letter attaching a copy of a newspaper article dated 03/29/86)

Type: CORRESPONDENCE
Author: Spangler, Carl M: Celanese Corporation
Recipient: Townsend, Gena D: US EPA
Attached: CEL-001-0635

Document Number: CEL-001-0635 To 0635 Parent: CEL-001-0634 Date: 03/29/86

Title: (Newspaper article titled: "Soil and Water Sampling completed at Celanese Dumps")

Type: CORRESPONDENCE
Author: Clemmer, Donna: Shelby Star
Recipient: none: none

Document Number: CEL-001-0636 To 0637 Date: 04/07/86

Title: (Letter confirming 04/04/86 telephone conversation regarding RI/FS Program at the site)

Type: CORRESPONDENCE
Author: Larme, J A: Celanese Corporation
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0638 To 0639 Date: 03/26/86

Title: Sample Analyses Request (from Bettis property)

Type: DATA
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: none: none

Document Number: CEL-001-0640 To 0643 Date: 04/08/86

Title: (Memo summarizing work completed during 03/00/86)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0644 To 0644 Date: 04/09/86

Title: (Memo describing site inspection on 03/26/86)

Type: CORRESPONDENCE
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: file: NC Dept of Human Resources

Document Number: CEL-001-0645 To 0645 Date: 04/09/86

Title: (Memo attaching a newspaper article)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Townsend, Gena D: US EPA
Recipient: Lucia, Shirley: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0646 To 0646 Date: 04/14/86

Title: (Letter attaching copy of article dated 04/11/86)

Type: CORRESPONDENCE
Author: Spangler, Carl M: Celanese Corporation
Recipient: Townsend, Gena D: US EPA
Attached: CEL-001-0647

Document Number: CEL-001-0647 To 0647 Parent: CEL-001-0646 Date: 04/11/86

Title: (Newspaper article titled: "Drinking Wells to Be Tested Again")

Type: CORRESPONDENCE
Author: Clemmer, Donna: Shelby Star
Recipient: none: none

Document Number: CEL-001-0648 To 0649 Date: 04/15/86

Title: (Cover letter enclosing site reports and results of inorganic analyses of well and surface water sampling)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: Anderson, Meredith Clarke: US EPA

Document Number: CEL-001-0650 To 0651
Date: 04/30/86

Title: (Letter describing the overview site visit on 03/12/86)

Type: CORRESPONDENCE
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0652 To 0700
Parent: CEL-001-0653
Date: 05/07/86

Title: Remedial Investigation/Feasibility Study Oversight/Technical Support Work Plan for Celanese Fiber Operation Site Shelby, NC Volume I

Type: PLAN
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: none: US EPA

Document Number: CEL-001-0653 To 0654
Date: 05/07/86

Title: (Cover letter forwarding Oversight and Technical Support Work Plan)

Type: CORRESPONDENCE
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: Townsend, Gena D: US EPA
Attached: CEL-001-0652 CEL-001-0696 CEL-001-0700

Document Number: CEL-001-0696 To 0696
Parent: CEL-001-0653
Date: 03/28/86

Title: (Memo certifying no known conflict of interest associated with the work assignment)

Type: CORRESPONDENCE
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: Curtis, Jonathan G: Camp Dresser & McKee (CDM)

Document Number: CEL-001-0700 To 0700
Parent: CEL-001-0653
Date: 03/05/86

Title: Work Assignment Cover Sheet

Type: OTHER
Author: Anderson, Meredith Clarke: US EPA
Recipient: none: Camp Dresser & McKee (CDM)

Document Number: CEL-001-0701 To 0702
Date: 05/06/86

Title: (Letter summarizing work completed on the RI/FS during 04/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA
Attached: CEL-001-0706 CEL-001-0707 CEL-001-0709 CEL-001-0711 CEL-001-0732 CEL-001-0734

Document Number: CEL-001-0703 To 0703
Date: 05/16/86

Title: (Memo attaching overivew of sampling activities during 03/24/86 through 03/26/86)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Sloan, Fred: US EPA
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0704 To 0705 Parent: CEL-001-0701 Date: 06/05/86

Title: (Letter summarizing work completed during 05/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0706 To 0706 Date: 07/01/86

Title: (Memo describing 06/23/86 through 06/25/86 oversight insepection at site)

Type: CORRESPONDENCE
Author: Wilson, Charles H: Camp Dresser & McKee (CDM)
Recipient: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)

Document Number: CEL-001-0707 To 0708 Parent: CEL-001-0701 Date: 08/08/86

Title: (Letter summarizing work completed during 07/00/86)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0709 To 0710 Parent: CEL-001-0701 Date: 09/10/86

Title: (Letter summarizing work completed during 08/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0711 To 0711 Parent: CEL-001-0701 Date: 10/10/86

Title: (Letter summarizing work completed during 09/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0712 To 0712 Date: 10/14/86

Title: (Memo confirming a conversation regarding the submittal of the Feasibility Study)

Type: CORRESPONDENCE
Author: Lucia, Shirley: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-[illegible]-0713 To 0730 Date: 10/23/86

Title: (Memo attaching Region IV data on split samples)

Type: CORRESPONDENCE
Author: Hooper, Charlie: US EPA
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0731 To 0731 Date: 10/31/86

Title: (Letter enclosing various site reports and results of inorganic analyses of well and surface water samples)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Moore, Ben: US EPA
Recipient: Perry, Doug: Cleveland, NC, County of

Document Number: CEL-001-0732 To 0733 Parent: CEL-001-0701 Date: 12/09/86

Title: (Letter summarizing work completed during 11/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0734 To 0734 Parent: CEL-001-0701 Date: 01/10/87

Title: (Letter summarizing work completed during 12/00/86)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0735 To 0735 Date: 02/09/87

Title: (Letter summarizing work completed during 01/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA
Attached: CEL-001-0748 CEL-001-0750 CEL-001-0811

Document Number: CEL-001-0736 To 0736 Date: 02/12/87

Title: (Letter enclosing status reports from 10/00/86 to 02/00/87 and Feasibility Study Work Plan)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Moore, Ben: US EPA
Recipient: Lavender, Jackie: Celanese Corporation

Document Number: CEL-001-0737 To 0737 Date: 02/12/87

Title: (Letter enclosing status reports and Feasibility Study work Plan for repository)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Moore, Ben: US EPA
Recipient: Perry, Doug: Cleveland, NC, County of

Document Number: CEL-001-0738 To 0738 Date: 02/18/87

Title: (Letter stating that there are no comments on the Feasibility Study Work Plan at this time)

Type: CORRESPONDENCE
Author: Swallow, June A: NC Dept of Human Resources
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0739 To 0740 Date: 02/23/87

Title: (Memo presenting comments on the draft RI and Analytical Data Reports dated 1986)

Type: CORRESPONDENCE
Author: Pietrosewicz, Casimer V: Agency for Toxic Substances & Disease Registry (ATSDR)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0741 To 0747 Date: 02/28/87

Title: (Letter providing comments on the Draft RI)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0748 To 0748 Parent: CEL-001-0735 Date: 03/06/87

Title: (Letter summarizing work completed during 02/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0749 To 0749 Date: 03/09/87

Title: (Letter explaining Superfund Amendments and Reauthorization Act of 1986 - SARA - and encouraging contact with EPA to discuss impact of SARA on site)

Type: CORRESPONDENCE
Author: Tobin, Patrick J: US EPA
Recipient: Pullen, James C: Celanese Corporation

Document Number: CEL-001-0750 To 0750 Parent: CEL-001-0735 Date: 04/10/87

Title: (Letter summarizing work completed on the RI/FS during 03/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0751 To 0752 Date: 04/24/87

Title: (Letter forwarding to Volume I and II of draft RI with comments from EPA)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA
Attached: CEL-001-0753 CEL-001-0801 CEL-001-0805

Document Number: CEL-001-0753 To 0805 Parent: CEL-001-0751 Date: 05/01/87

Title: Final Feasibility Study Work Plan Celanese Fibers Operations Shelby, NC

Type: PLAN
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: US EPA

Document Number: CEL-001-0801 To 0804 Parent: CEL-001-0751 Date: 12/11/85

Title: (Letter commenting on the Feasibility Study Work Plan)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0805 To 0805 Parent: CEL-001-0751 Date: 12/19/86

Title: (Letter with comment to add to list mailed on 12/11/86)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0806 To 0810 Date: 08/27/87

Title: (Letter explaining an error made on original Form 1 for sample GW-017)

Type: CORRESPONDENCE
Author: McCord, John H: Davis & Floyd
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0811 To 0811 Parent: CEL-001-0735 Date: 05/11/87

Title: (Letter summarizing work completed during 04/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0812 To 0812 Date: 05/14/87

Title: (Letter concerning the meeting to discuss responses to comments for the RI report and submittal of Final RI report)

Type: CORRESPONDENCE
Author: Lucia, Shirley: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0001 To 0283 Date: 06/01/87

Title: Final Remedial Investigation Report Volume I - Text, Tables and Figures

Type: PLAN
Condition: MARGINALIA
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: US EPA

Document Number: CEL-002-0284 To 0776 Date: 06/01/87

Title: Final Remedial Investigation Report, Appendix Volume I, Appendix A through O

Type: PLAN
Condition: MARGINALIA
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: US EPA
Attached: CEL-002-0289 CEL-002-0290 CEL-002-0305 CEL-002-0306 CEL-002-0307 CEL-002-0308 CEL-002-0311
CEL-002-0312 CEL-002-0327 CEL-002-0328 CEL-002-0332 CEL-002-0337 CEL-002-0339 CEL-002-0340
CEL-002-0342 CEL-002-0344 CEL-002-0348 CEL-002-0351 CEL-002-0355 CEL-002-0357 CEL-002-0359
CEL-002-0361 CEL-002-0363 CEL-002-0365 CEL-002-0366 CEL-002-0368 CEL-002-0370 CEL-002-0371
CEL-002-0372 CEL-002-0373 CEL-002-0374 CEL-002-0375

Document Number: CEL-002-0289 To 0289 Parent: CEL-002-0284 Date: 07/30/86

Title: (Memo forwarding Consent Agreement)

Type: CORRESPONDENCE
Author: Ross, William E: Fiber Industries
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-002-0290 To 0301 Parent: CEL-002-0284 Date: 03/10/86

Title: Administrative Order on Consent

Type: LEGAL DOCUMENT
Author: Ravan, Jack E: US EPA
Recipient: illegible: Celanese Corporation

Document Number: CEL-002-0305 To 0305 Parent: CEL-002-0284 Date: 01/11/83

Title: (Letter requesting part B of application for hazardous waste facility for storage containers)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Strickland, O W: NC Dept of Human Resources
Recipient: Brant, George: Fiber Industries

Document Number: CEL-002-0306 To 0306 Parent: CEL-002-0284 Date: 04/19/83

Title: (Memo regarding request in letter dated 01/11/83 for Part B permit application)

Type: CORRESPONDENCE
Author: Ross, William E: Fiber Industries
Recipient: Strickland, O W: NC Dept of Human Resources

Document Number: CEL-002-0307 To 0307 Parent: CEL-002-0284 Date: 10/12/83

Title: (Letter forwarding Permit #7241R dated 10/12/83 and shall void #7241)

Type: CORRESPONDENCE
Author: Helms, Robert F: NC Dept of Natural Resources & Community Development
Recipient: Ross, William E: Fiber Industries

Document Number: CEL-002-0308 To 0310 Parent: CEL-002-0284 Date: 10/12/83

Title: Permit for the Discharge of Sewage, Industrial Wastes, or Other Wastes

Type: LEGAL DOCUMENT
Author: Helms, Robert F: NC Dept of Natural Resources & Community Development
Recipient: none: Fiber Industries

Document Number: CEL-002-0311 To 0311 Parent: CEL-002-0284 Date: 03/01/85

Title: (Letter forwarding NPDES permit)

Type: CORRESPONDENCE
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: Pullen, James C: Celanese Corporation

Document Number: CEL-002-0312 To 0326 Parent: CEL-002-0284 Date: 03/01/85

Title: Permit to Discharge Wastewater Under the National Pollutant Discharge Elimination System

Type: LEGAL DOCUMENT
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: none: Celanese Corporation

Document Number: CEL-002-0327 To 0327 Parent: CEL-002-0284 Date: 04/04/86

Title: (Letter forwarding Permit #3754R4 for discharge of air contaminants into atmosphere)

Type: CORRESPONDENCE
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: Mayrose, W C: Celanese Corporation

Document Number: CEL-002-0328 To 0331 Parent: CEL-002-0284 Date: / /

Title: Air Permit for the Discharge of Air Contaminants Into the Atmosphere

Type: LEGAL DOCUMENT
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: none: Celanese Corporation

Document Number: CEL-002-0332 To 0336 Parent: CEL-002-0284 Date: 01/13/86

Title: (Letter forwarding modifications to the Permit #NC 004952)

Type: CORRESPONDENCE
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: Ross, William E: Fiber Industries

Document Number: CEL-002-0337 To 0337 Parent: CEL-002-0284 Date: 04/11/85

Title: (Memo attaching the final NPDES permit)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Pullen, James C: Celanese Corporation
Recipient: none: illegible

Document Number: CEL-002-0339 To 0339 Parent: CEL-002-0284 Date: 02/02/84

Title: (Letter reaffirming that company does not choose to file a Part B application)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Sellers, M D: Celanese Corporation
Recipient: Strickland, [illegible] W: NC Dept of Human Resources

---

Document Number: CEL-002-0340 To 0340 Parent: CEL-002-0284 Date: 09/17/84

Title: (Letter advising that plant has been denied a permit and all the implications)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Strickland, O W: NC Dept of Human Resources
Recipient: Ross, William E: Fiber Industries

Document Number: CEL-002-0342 To 0343 Parent: CEL-002-0284 Date: 01/16/86

Title: (Letter summarizing work performed during 12/00/85)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Anderson, Meredith Clarke: US EPA

Document Number: CEL-002-0344 To 0347 Parent: CEL-002-0284 Date: 02/11/86

Title: (Letter summarizing work during 01/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0348 To 0350 Parent: CEL-002-0284 Date: 03/04/86

Title: (Letter presenting 02/00/86 Status Report)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0351 To 0354 Parent: CEL-002-0284 Date: 04/08/86

Title: (Letter summarizing 03/00/86 Status Report)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0355 To 0356 Parent: CEL-002-0284 Date: 04/08/86

Title: (Letter providing 04/00/85 Status Report)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0357 To 0358 Parent: CEL-002-0284 Date: 06/05/86

Title: (Letter presenting 05/00/86 Status Report)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-[illegible]-0359 To 0360 Parent: CEL-002-0284 Date: 07/07/86

Title: (Letter presenting 06/00/86 Status Report)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0361 To 0362 Parent: CEL-002-0284 Date: 08/08/86

Title: (Letter summarizing work completed during 07/00/86)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0363 To 0364 Parent: CEL-002-0284 Date: 09/10/86

Title: (Letter summarizing work completed during 08/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0365 To 0365 Parent: CEL-002-0284 Date: 10/10/86

Title: (Letter summarizing work completed during 09/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0366 To 0367 Parent: CEL-002-0284 Date: 11/10/86

Title: (Letter summarizing work completed during 10/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0368 To 0369 Parent: CEL-002-0284 Date: 12/09/86

Title: (Letter summarizing work completed during 11/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0370 To 0370 Parent: CEL-002-0284 Date: 01/10/86

Title: (Letter summarizing work completed during 12/00/86 and planned activities for 01/00/87)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0371 To 0371 Parent: CEL-002-0284 Date: 02/09/87

Title: (Letter summarizing work completed during 01/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0372 To 0372 Parent: CEL-002-0284 Date: 03/06/87

Title: (Letter summarizing work completed during 02/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0373 To 0373 Parent: CEL-002-0284 Date: 04/10/84

Title: (Letter summarizing work completed during 03/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0374 To 0374 Parent: CEL-002-0284 Date: 05/10/87

Title: (Letter summarizing work completed during 04/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0375 To 0376 Parent: CEL-002-0284 Date: 06/09/87

Title: (Letter summarizing work completed during 05/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Glenn, Michelle: US EPA

Document Number: CEL-002-0777 To 1099 Date: 06/22/87

Title: Final Remedial Investigation Report Appendix Volume II Appendix P Through S

Type: PLAN
Condition: MARGINALIA
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: US EPA
Attached: CEL-002-1100 CEL-002-1451 CEL-002-1452 CEL-002-1453 CEL-002-1454 CEL-002-1456 CEL-002-1622

Document Number: CEL-002-1100 To 1450 Parent: CEL-002-0777 Date: / /

Title: Appendix P Sediment Analysis

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-002-1451 To 1455 Parent: CEL-002-0777 Date: / /

Title: Appendix Q Correspondence on analytical Results

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-002-1452 To 1452 Parent: CEL-002-0777 Date: 11/10/86

Title: (Letter enclosing final data on project #1175-85-1050A)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: McCord, John H: Davis & Floyd
Recipient: Lucia, Shirley: Soil & Material Engineers (S&ME)

Document Number: CEL-002-1453 To 1453 Parent: CEL-002-0777 Date: 11/10/86

Title: (Letter listing corrections/additions for letter dated 10/23/86)

Type: CORRESPONDENCE
Author: McCord, John H: Davis & Floyd
Recipient: Lucia, Shirley: Soil & Material Engineers (S&ME)

Document Number: CEL-002-1454 To 1455 Parent: CEL-002-0777 Date: 10/23/86

Title: (Letter stating that all laboratory analyses conducted by Davis & Floyd, Inc and Triangle Lab is complete with list of deficiencies in analytical results)

Type: CORRESPONDENCE
Author: McCord, John H: Davis & Floyd
Recipient: Lucia, Shirley: Soil & Material Engineers (S&ME)

Document Number: CEL-002-1456 To 1621 Parent: CEL-002-0777 Date: / /

Title: Appendix R Groundwater Sample Collection Summary Sheets (samples taken 02/05/86 through 06/26/86)

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-002-1622 To 1659 Parent: CEL-002-0777 Date: / /

Title: Appendix S Health and Environmental Effects

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-0001 To 0001 Date: 06/23/87

Title: (Memo announcing public meeting for 07/21/87)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: Thompson, [illegible]: US EPA

Document Number: CEL-003-0002 To 0002 Date: 11/12/87

Title: (Letter forwarding Final Report "Transcript of the Public Meeting - Celanese Fibers Operations Site, Remedial Investigation")

Type: CORRESPONDENCE
Author: Butler, Harry P: Camp Dresser & McKee (CDM)
Recipient: Waetjen, Hans: US EPA
Attached: CEL-003-0003

Document Number: CEL-003-0003 To 0111 Parent: CEL-003-0002 Date: 07/21/87

Title: Final Report - Transcript of the Public Meeting - Celanese Fibers Operations Site Remedial Investigation

Type: PLAN
Author: Loyld, Sharon L: Booz Allen & Hamilton
Recipient: none: US EPA

Document Number: CEL-003-0112 To 0116 Date: 01/01/88

Title: Fact Sheet - CFO Superfund Site Feasibility Study

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-0117 To 0507 Date: 02/26/88

Title: Final Feasibility Study Report Operable Unit I - Groundwater Public Health Assessment for Celanese Fibers Operations

Type: PLAN
Author: Hardie, Michael G: Soil & Material Engineers (S&ME)
Recipient: none: US EPA

Document Number: CEL-003-0508 To 0509 Date: 03/23/88

Title: Declaration for the Enforcement Record of Decision

Type: LEGAL DOCUMENT
Author: DeHihns, Lee A: US EPA
Recipient: none: none
Attached: CEL-003-0510

Document Number: CEL-003-0510 To 0581 Parent: CEL-003-0508 Date: / /

Title: Enforcement Record of Decision Summary of Remedial Alternative Selection

Type: PLAN
Author: none: US EPA
Recipient: none: US EPA

Document Number: CEL-003-0582 To 0582 Date: 07/27/88

Title: (Letter forwarding Health Assessment for site)

Type: CORRESPONDENCE
Author: Pietrosewicz, Casimer V: Agency for Toxic Substances & Disease Registry (ATSDR)
Recipient: Green, Richard D: US EPA
Attached: CEL-003-0583

Document Number: CEL-003-0583 To 0593 Parent: CEL-003-0582 Date: 07/20/88

Title: Health Assessment for Celanese Fibers Operation NPL Site

Type: PLAN
Author: Carter, Chebryll J: US Dept of Health & Human Services
Recipient: none: none

Document Number: CEL-003-0594 To 1107 Date: 01/01/89

Title: Final Feasibility Study Report - Operable Unit 2 - Source Material - Hoechst Celanese Facility, Shelby, North Carolina - Volume 1: Text, Appendices I Through III

Type: PLAN
Author: Mays, Michael K: Soil & Material Engineers (S&ME)
Recipient: none: US EPA
Attached: CEL-003-0786 CEL-003-0804 CEL-003-0818

Document Number: CEL-003-0786 To 0803 Parent: CEL-003-0594 Date: / /

Title: Appendix I Analytical Data

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-0804 To 0817 Parent: CEL-003-0594 Date: / /

Title: Appendix II Risk Assessment Data

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-0818 To 1107 Parent: CEL-003-0594 Date: 01/01/89

Title: Appendix III: Final Expanded Characterization Study - Glycol Recovery Unit Sludge and Burn Pit Area - Hoechst Celanese Facility, Shelby, North Carolina

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1108 To 1489 Date: 01/01/89

Title: Final Feasibility Study Report - Operable Unit 2 - Source Material - Hoechst Celanese Facility, Shelby, North Carolina - Volume 2: Appendices, Appendices IV, A Through C

Type: PLAN
Author: Mays, Michael K: Soil & Material Engineers (S&ME)
Recipient: none: US EPA
Attached: CEL-003-1109 CEL-003-1210 CEL-003-1220 CEL-003-1336

Document Number: CEL-003-1109 To 1209 Parent: CEL-003-1108 Date: 01/01/89

Title: Appendix IV Final Treatability Study - Biological Treatment of the Glycol Recovery Unit Sludge - Hoechst Celanese Facility, Shelby, North Carolina

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1210 To 1219 Parent: CEL-003-1108 Date: / /

Title: Appendix A Photographs

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1220 To 1335 Parent: CEL-003-1108 Date: / /

Title: Appendix B Daily Logs

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1336 To 1489 Parent: CEL-003-1108 Date: / /

Title: Appendix C Microtox Results

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1490 To 1931 Date: 01/01/89

Title: Final Feasibility Study Report - Operable Unit 2 - Source Material - Hoechst Celanese Facility, Shelby, North Carolina - Volume 3: Appendices, Appendices IV, D and E, V Through IX

Type: PLAN
Author: Mays, Michael K: Soil & Material Engineers (S&ME)
Recipient: none: US EPA
Attached: CEL-003-1491 CEL-003-1841 CEL-003-1847 CEL-003-1865 CEL-003-1895 CEL-003-1902 CEL-003-1914

Document Number: CEL-003-1491 To 1840 Parent: CEL-003-1490 Date: / /

Title: Appendix D Laboratory Analytical Data

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1841 To 1846 Parent: CEL-003-1490 Date: / /

Title: Appendix E Calculation Briefs

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1847 To 1864 Parent: CEL-003-1490 Date: / /

Title: Appendix V Wet Air Oxidation Report

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1865 To 1894 Parent: CEL-003-1490 Date: / /

Title: Appendix VI Westinghouse Incineration Report

Type: PLAN
Author: Bachovchin, D M: Westinghouse
Recipient: none: Soil & Material Engineers (S&ME)

10

Document Number: CEL-003-1895 To 1901 Parent: CEL-003-1490 Date: 10/12/88

Title: Appendix VII University of Central Florida Incineration Report

Type: PLAN
Author: Clausen, Christian: University of Central Florida
Recipient: none: Soil & Material Engineers (S&ME)

Document Number: CEL-003-1902 To 1913 Parent: CEL-003-1490 Date: 11/11/88

Title: Appendix VIII Treatability Study Report

Type: PLAN
Author: none: KiBer Associates, Inc.
Recipient: none: Westinghouse

Document Number: CEL-003-1914 To 1931 Parent: CEL-003-1490 Date: / /

Title: Appendix IX Alternative Cost Calculations

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1932 To 1934 Date: 01/11/89

Title: (Cover letter transmitting the final draft Feasibility Study Report)

Type: CORRESPONDENCE
Author: Glenn, Michelle: US EPA
Recipient: Crosby, Lee: NC Dept of Human Resources

Document Number: CEL-003-1935 To 1938 Date: 02/07/89

Title: (Letter submitting comments on the Feasibility Study Report)

Type: CORRESPONDENCE
Author: Mayrose, W C: Celanese Corporation
Recipient: Glenn, Michelle: US EPA
Attached: CEL-003-1937

Document Number: CEL-003-1937 To 1937 Parent: CEL-003-1935 Date: 01/18/89

Title: (Letter estimating costs for remedial services)

Type: CORRESPONDENCE
Author: Dukes, Robert D: GMX Services, Inc.
Recipient: Caldwell, Ron E: Celanese Corporation

Document Number: CEL-003-1939 To 1939 Date: 02/08/89

Title: (Letter transmitting the Operable Unit Two Feasibility Study and Proposed Plan Fact Sheet)

Type: CORRESPONDENCE
Author: Hallahan, Frances: Camp Dresser & McKee (CDM)
Recipient: Harvell, Rose: US EPA
Attached: CEL-003-1940

Document Number: CEL-003-1940 To 1946 Parent: CEL-003-1939 Date: 02/08/89

Title: Operable Unit Two Feasibility Study and Proposed Plan Fact Sheet - Celanese Fibers Operations Site - Cleveland County, North Carolina

Type: PLAN
Author: Lloyd, Sharon L: Booz Allen & Hamilton
Recipient: none: none

Document Number: CEL-003-1947 To 1948 Date: 02/08/89

Title: (Letter supporting Hoechst Celanese's recommended remedial approach to Operable Unit Two)

Type: CORRESPONDENCE
Author: Caldwell, Ron E: Celanese Corporation
Recipient: Glenn, Michelle: US EPA
Attached: CEL-003-1949

Document Number: CEL-003-1949 To 1953 Parent: CEL-003-1947 Date: 01/18/89

Title: (State of South Carolina Executive Order No. 89-03 concerning hazardous waste treatment and disposal facilities in the State)

Type: LEGAL DOCUMENT
Author: Campbell, Carroll A, Jr: SC, State of
Recipient: none: none

Document Number: CEL-003-1954 To 1954 Date: 02/09/89

Title: (Letter rejecting Hoechst Celanese's preference for off-site incineration)

Type: CORRESPONDENCE
Author: Glenn, Michelle: US EPA
Recipient: Mayrose, W C: Celanese Corporation

Document Number: CEL-003-1955 To 1955 Date: 02/09/89

Title: (Press release announcing a public meeting to be held on February 16, 1989)

Type: OTHER
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-1956 To 1956 Date: 02/09/89

Title: (Announcement of the February 16, 1989 public meeting from the Shelby Star)

Type: NEWS CLIPPING
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-1957 To 1957 Date: 02/10/89

Title: (Example of letter sent to media transmitting a public meeting announcement and Fact Sheet)

Type: CORRESPONDENCE
Author: Lloyd, Sharon L: Booz Allen & Hamilton
Recipient: Clemmer, Donna: Shelby Star
Attached: CEL-003-1958 CEL-003-1960

Document Number: CEL-003-1958 To 1959 Parent: CEL-003-1957 Date: 02/10/89

Title: (List of media representatives receiving copies of the public meeting announcement and the Fact Sheet)

Type: OTHER
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-1960 To 1960 Parent: CEL-003-1957 Date: 02/10/89

Title: (Announcement for the public meeting to be held February 16, 1989)

Type: OTHER
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-1961 To 1961 Date: 02/11/89

Title: "EPA to Address Cleanup of Hazardous Waste Site" (article from The Shelby Star newspaper)

Type: NEWS CLIPPING
Author: Clemmer, Donna: Shelby Star
Recipient: none: none

CELANESE CORP SHELBY FIBER OPERATIONS
(OPERABLE UNIT 2)

NPL SITE ADMINISTRATIVE RECORD

NOTE

ALL DOCUMENTS PRIOR TO CEL-003-0594 CAN BE FOUND IN THE OCTOBER 6, 1988 ADMINISTRATIVE RECORD FOR OPERABLE UNIT 1

Document Number: CEL-001-0170 To 0170 Parent: CEL-001-0075 Date: / /

Title: (Memo reqesting to be on mailing list for information on site with handwritten note)

Type: CORRESPONDENCE
Author: Rhem, Donald F: resident
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0598 To 0608 Parent: CEL-001-0597 Date: / /

Title: Overview Report Celanese Fibers Shelby, NC

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: CEL-001-0624 To 0633 Date: / /

Title: CERCLA Quality Control Overview Report Celanese Fibers Shelby, NC

Type: PLAN
Author: Sloan, Fred: US EPA
Recipient: none: none

Document Number: CEL-002-0328 To 0331 Parent: CEL-002-0284 Date: / /

Title: Air Permit for the Discharge of Air Contaminants Into the Atmosphere

Type: LEGAL DOCUMENT
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: none: Celanese Corporation

Document Number: CEL-002-1100 To 1450 Parent: CEL-002-0777 Date: / /

Title: Appendix P Sediment Analysis

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-002-1451 To 1455 Parent: CEL-002-0777 Date: / /

Title: Appendix Q Correspondence on analytical Results

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-002-1456 To 1621 Parent: CEL-002-0777 Date: / /

Title: Appendix R Groundwater Sample Collection Summary Sheets (samples taken 02/05/86 through 06/26/86)

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-002-1622 To 1659 Parent: CEL-002-0777 Date: / /

Title: Appendix B Health and Environmental Effects

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-0510 To 0581 Parent: CEL-003-0508 Date: / /

Title: Enforcement Record of Decision Summary of Remedial Alternative Selection

Type: PLAN
Author: none: US EPA
Recipient: none: US EPA

Document Number: CEL-003-0786 To 0803 Parent: CEL-003-0594 Date: / /

Title: Appendix I Analytical Data

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-0804 To 0817 Parent: CEL-003-0594 Date: / /

Title: Appendix II Risk Assessment Data

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1210 To 1219 Parent: CEL-003-1108 Date: / /

Title: Appendix A Photographs

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1220 To 1335 Parent: CEL-003-1108 Date: / /

Title: Appendix B Daily Logs

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1336 To 1468 Parent: CEL-003-1108 Date: / /

Title: Appendix C Microtox Results

Type: PLAN
Author: none: none
Recipient: none: none

10

Document Number: CEL-003-1491 To 1840 Parent: CEL-003-1490 Date: / /

Title: Appendix D Laboratory Analytical Data

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1841 To 1846 Parent: CEL-003-1490 Date: / /

Title: Appendix E Calculation Briefs

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1847 To 1864 Parent: CEL-003-1490 Date: / /

Title: Appendix V Wet Air Oxidation Report

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1865 To 1894 Parent: CEL-003-1490 Date: / /

Title: Appendix VI Westinghouse Incineration Report

Type: PLAN
Author: Bachovchin, D M: Westinghouse
Recipient: none: Soil & Material Engineers (S&ME)

Document Number: CEL-003-1914 To 1931 Parent: CEL-003-1490 Date: / /

Title: Appendix IX Alternative Cost Calculations

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-002-0305 To 0305 Parent: CEL-002-0284 Date: 01/11/83

Title: (Letter requesting part B of application for hazardous waste facility for storage containers)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Strickland, O W: NC Dept of Human Resources
Recipient: Brant, George: Fiber Industries

Document Number: CEL-002-0306 To 0306 Parent: CEL-002-0284 Date: 04/19/83

Title: (Memo regarding request in letter dated 01/11/83 for Part B permit application)

Type: CORRESPONDENCE
Author: Ross, William E: Fiber Industries
Recipient: Strickland, O W: NC Dept of Human Resources

Document Number: CEL-002-0307 To 0307 Parent: CEL-002-0284 Date: 10/12/83

Title: (Letter forwarding Permit #7241R dated 10/12/83 and shall void #7241)

Type: CORRESPONDENCE
Author: Helms, Robert F: NC Dept of Natural Resources & Community Development
Recipient: Ross, William E: Fiber Industries

Document Number: CEL-002-0308 To 0310 Parent: CEL-002-0284 Date: 10/12/83

Title: Permit for the Discharge of Sewage, Industrial Wastes, or Other Wastes

Type: LEGAL DOCUMENT
Author: Helms, Robert F: NC Dept of Natural Resources & Community Development
Recipient: none: Fiber Industries

Document Number: CEL-002-0339 To 0339 Parent: CEL-002-0284 Date: 02/02/84

Title: (Letter reaffirming that company does not choose to file a Part B application)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Sellers, M D: Celanese Corporation
Recipient: Strickland, O W: NC Dept of Human Resources

Document Number: CEL-002-0373 To 0373 Parent: CEL-002-0284 Date: 04/10/84

Title: (Letter summarizing work completed during 03/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0340 To 0340 Parent: CEL-002-0284 Date: 09/17/84

Title: (Letter advising that plant has been denied a permit and all the implications)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Strickland, O W: NC Dept of Human Resources
Recipient: Ross, William E: Fiber Industries

Document Number: CEL-002-0311 To 0311 Parent: CEL-002-0284 Date: 03/01/85

Title: (Letter forwarding NPDES permit)

Type: CORRESPONDENCE
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: Pullen, James C: Celanese Corporation

Document Number: CEL-002-0312 To 0326 Parent: CEL-002-0284 Date: 03/01/85

Title: Permit to Discharge Wastewater Under the National Pollutant Discharge Elimination System

Type: LEGAL DOCUMENT
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: none: Celanese Corporation

Document Number: CEL-002-0337 To 0337 Parent: CEL-002-0284 Date: 04/11/85

Title: (Memo attaching the final NPDES permit)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Pullen, James C: Celanese Corporation
Recipient: none: illegible

Document Number: CEL-001-0001 To 0001 Date: 06/01/85

Title: (Letter enclosing Draft Final Report for the site)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Clarke, Meredith L: US EPA
Recipient: Simpson, Gary L: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0002 To 0074 Parent: CEL-001-0003 Date: 07/22/85

Title: Final Report Celanese Fibers Operations Site forward Planning Study

Type: PLAN
Author: none: Camp Dresser & McKee (CDM)
Recipient: none: US EPA

Document Number: CEL-001-0003 To 0004 Date: 07/22/85

Title: (Cover letter submitting the Final Report)

Type: CORRESPONDENCE
Author: Roberts, John L: Camp Dresser & McKee (CDM)
Recipient: Wright, Russell L: US EPA
Attached: CEL-001-0002

Document Number: CEL-001-0533 To 0533 Parent: CEL-001-0297 Date: 07/22/85

Title: (Memo attaching Health and Safety Plan information)

Type: CORRESPONDENCE
Author: Ross, William E: Fiber Industries
Recipient: Simpson, Gary L: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0164 To 0165 Parent: CEL-001-0075 Date: 08/30/85

Title: (Handwritten letter commenting on the meeting between EPA and Celanese and asking for EPA to "be Celanese's conscience and watch dog")

Type: CORRESPONDENCE
Author: Lavender, Jackie: Celanese Corporation
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0162 To 0163 Parent: CEL-001-0075 Date: 09/24/85

Title: (Letter summarizing comments on the Draft Work Plan for the site)

Type: CORRESPONDENCE
Author: Link, Donald R: NC Dept of Natural & Economic Resources
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0166 To 0167 Parent: CEL-001-0075 Date: 09/28/85

Title: (Handwritten letter enclosing a list of questions and concerns)

Type: CORRESPONDENCE
Author: Cooper, Jay B: resident
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0168 To 0169 Parent: CEL-001-0075 Date: 10/02/85

Title: (Memo reviewing the Draft RI/FS Work Plan dated 08/20/85)

Type: CORRESPONDENCE
Author: Pietrosewicz, Casimer V: Agency for Toxic Substances & Disease Registry (ATSDR)
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0150 To 0156 Parent: CEL-001-0075 Date: 10/04/85

Title: (Memo submitting comments to incorporate in the Final Work Plan)

Type: CORRESPONDENCE
Author: Clarke, Meredith L: US EPA
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0157 To 0157 Parent: CEL-001-0075 Date: 10/04/85

Title: (Memo accepting draft work plan and asking to review the project sampling plan)

Type: CORRESPONDENCE
Author: Bokey, William R: US EPA
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0075 To 0263 Date: 11/01/85

Title: Work Plan Shelby Facility Celanese Fibers Operations Shelby, NC

Type: PLAN
Author: none: Soil & Material Engineers (S&ME)
Recipient: none: none
Attached: CEL-001-0076 CEL-001-0150 CEL-001-0157 CEL-001-0162 CEL-001-0164 CEL-001-0166 CEL-001-0168
CEL-001-0170

Document Number: CEL-001-0076 To 0077 Parent: CEL-001-0075 Date: 11/01/85

Title: (Memo attaching the revised work plan for the site and asking for a response)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0264 To 0267 Date: 12/01/85

Title: Fact Sheet

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: CEL-001-0268 To 0268 Date: 12/06/85

Title: (Certified letter approving Work Plan by Soil and Material Engineers dated 11/01/85)

Type: CORRESPONDENCE
Author: Devine, Thomas W: US EPA
Recipient: Engelman, Susan P: Celanese Corporation

Document Number: CEL-001-0801 To 0804 Parent: CEL-001-0751 Date: 12/11/85

Title: (Letter commenting on the Feasibility Study Work Plan)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0269 To 0270 Date: 12/12/85

Title: (Letter summarizing activities at the site during 11/00/85)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Clarke, Meredith L: US EPA

Document Number: CEL-001-0273 To 0293 Parent: CEL-001-0271 Date: 01/01/86

Title: Community Relations Plan for Celanese Fibers Operations Site Shelby, NC

Type: PLAN
Author: Henderson, H Michael: US EPA
Recipient: none: none

Document Number: CEL-001-0271 To 0272 Date: 01/08/86

Title: (Memo forwarding final Community Relations Plan for the site with list of addressee's also attached)

Type: CORRESPONDENCE
Author: Anderson, Meredith Clarke: US EPA
Recipient: Crosby, Lee: NC Dept of Human Resources
Attached: CEL-001-0273

Document Number: CEL-002-0370 To 0370 Parent: CEL-002-0284 Date: 01/10/86

Title: (Letter summarizing work completed during 12/00/86 and planned activities for 01/00/87)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-[illegible]0332 To 0336 Parent: CEL-002-0284 Date: 01/13/86

Title: (Letter forwarding modifications to the Permit #NC 004952)

Type: CORRESPONDENCE
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: Ross, William E: Fiber Industries

Document Number: CEL-001-0294 To 0295
Date: 01/16/86

Title: (Memo presenting Status report for the month of 12/00/85)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Anderson, Meredith Clarke: US EPA

Document Number: CEL-002-0342 To 0343
Parent: CEL-002-0284
Date: 01/16/86

Title: (Letter summarizing work performed during 12/00/85)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Anderson, Meredith Clarke: US EPA

Document Number: CEL-001-0296 To 0583
Parent: CEL-001-0297
Date: 01/21/86

Title: Final Project Operations Plan Celanese Fibers operations Facility Shelby, NC

Type: PLAN
Author: none: Soil & Material Engineers (S&ME)
Recipient: none: US EPA

Document Number: CEL-001-0297 To 0297
Date: 01/21/86

Title: (Letter attaching the Final Project Operations Plan for the site)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: Anderson, Meredith Clarke: US EPA
Attached: CEL-001-0296 CEL-001-0533

Document Number: CEL-001-0584 To 0587
Date: 02/07/86

Title: (Memo reporting on meeting held on 01/30/86 concerning sampling and analytical program for remedial investigation)

Type: CORRESPONDENCE
Author: Lucia, Shirley: Soil & Material Engineers (S&ME)
Recipient: Anderson, Meredith Clarke: US EPA

Document Number: CEL-001-0588 To 0591
Date: 02/11/86

Title: (Letter summarizing the work on the CFO/Shelby RI/FS for the month of 01/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, [illegible] D: US EPA

Document Number: CEL-001-0593 To 0593
Parent: CEL-001-0592
Date: 02/11/86

Title: Sample Analyses Request (for Gene Bettis property)

Type: DATA
Author: DaRosa, Pat: NC Dept of Human Resources
Recipient: none: none

Document Number: CKL-002-0344 To 0347 Parent: CKL-002-0284 Date: 02/11/86

Title: (Letter summarizing work during 01/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CKL-001-0592 To 0592 Date: 02/17/86

Title: (Memo describing Site Visit Trip Report on 02/11/86 and sampling sites)

Type: CORRESPONDENCE
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: file: none
Attached: CKL-001-0593

Document Number: CKL-001-0594 To 0596 Date: 03/04/86

Title: (Letter describing work on the RI/FS at the site during the month of 02/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CKL-001-0597 To 0597 Date: 03/04/86

Title: (Memo attaching an overview of sampling activities during 02/05/86 and 02/06/86)

Type: CORRESPONDENCE
Author: Vick, Hugh C: US EPA
Recipient: Clarke, Meredith L: US EPA
Attached: CKL-001-0598

Document Number: CKL-002-0348 To 0350 Parent: CKL-002-0284 Date: 03/04/86

Title: (Letter presenting 02/00/86 Status Report)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CKL-001-0700 To 0700 Parent: CKL-001-0653 Date: 03/05/86

Title: Work Assignment Cover Sheet

Type: OTHER
Author: Anderson, Meredith Clarke: US EPA
Recipient: none: Camp Dresser & McKee (CDM)

Document Number: CKL-001-0609 To 0609 Date: 03/10/86

Title: (Letter enclosing an executed copy of the Administrative Order for the site)

Type: CORRESPONDENCE
Author: Ravan, Jack E: US EPA
Recipient: Engelman, Susan P: Celanese Corporation
Attached: CKL-001-0610

Document Number: CEL-001-0610 To 0621 Parent: CEL-001-0609 Date: 03/10/86

Title: Administrative Order on Consent

Type: LEGAL DOCUMENT
Author: Ravan, Jack E: US EPA
Recipient: none: none

Document Number: CEL-002-0290 To 0301 Parent: CEL-002-0284 Date: 03/10/86

Title: Administrative Order on Consent

Type: LEGAL DOCUMENT
Author: Ravan, Jack E: US EPA
Recipient: illegible: Celanese Corporation

Document Number: CEL-001-0622 To 0623 Date: 03/21/86

Title: (Memo summarizing community relations activities to date)

Type: CORRESPONDENCE
Author: Anderson, Meredith Clarke: US EPA
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0638 To 0639 Date: 03/26/86

Title: Sample Analyses Request (from Bettis property)

Type: DATA
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: none: none

Document Number: CEL-001-0696 To 0696 Parent: CEL-001-0653 Date: 03/28/86

Title: (Memo certifying no known conflict of interest associated with the work assignment)

Type: CORRESPONDENCE
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: Curtis, Jonathan G: Camp Dresser & McKee (CDM)

Document Number: CEL-001-0635 To 0635 Parent: CEL-001-0634 Date: 03/29/86

Title: (Newspaper article titled: "Soil and Water Sampling completed at Celanese Dumps")

Type: CORRESPONDENCE
Author: Clemmer, Donna: Shelby Star
Recipient: none: none

Document Number: CEL-001-0634 To 0634 Date: 03/31/86

Title: (Cover letter attaching a copy of a newspaper article dated 03/29/86)

Type: CORRESPONDENCE
Author: Spangler, Carl M: Celanese Corporation
Recipient: Townsend, Gena D: US EPA
Attached: CEL-001-0635

Document Number: CEL-002-0327 To 0327 Parent: CEL-002-0284 Date: 04/04/86

Title: (Letter forwarding Permit #3754R4 for discharge of air contaminants into atmosphere)

Type: CORRESPONDENCE
Author: Wilms, R Paul: NC Dept of Natural Resources & Community Development
Recipient: Mayrose, W C: Celanese Corporation

Document Number: CEL-001-0636 To 0637 Date: 04/07/86

Title: (Letter confirming 04/04/86 telephone conversation regarding RI/FS Program at the site)

Type: CORRESPONDENCE
Author: Larme, J A: Celanese Corporation
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0640 To 0643 Date: 04/08/86

Title: (Memo summarizing work completed during 03/00/86)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0351 To 0354 Parent: CEL-002-0284 Date: 04/08/86

Title: (Letter summarizing 03/00/86 Status Report)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0355 To 0356 Parent: CEL-002-0284 Date: 04/08/86

Title: (Letter providing 04/00/85 Status Report)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0644 To 0644 Date: 04/09/86

Title: (Memo describing site inspection on 03/26/86)

Type: CORRESPONDENCE
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: file: NC Dept of Human Resources

Document Number: CEL-001-0645 To 0645 Date: 04/09/86

Title: (Memo attaching a newspaper article)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Townsend, Gena D: US EPA
Recipient: Lucia, Shirley: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0647 To 0647 Parent: CEL-001-0646 Date: 04/11/86

Title: (Newspaper article titled: "Drinking Wells to Be Tested Again")

Type: CORRESPONDENCE
Author: Clemmer, Donna: Shelby Star
Recipient: none: none

Document Number: CEL-001-0646 To 0646 Date: 04/14/86

Title: (Letter attaching copy of article dated 04/11/86)

Type: CORRESPONDENCE
Author: Spangler, Carl M: Celanese Corporation
Recipient: Townsend, Gena D: US EPA
Attached: CEL-001-0647

Document Number: CEL-001-0648 To 0649 Date: 04/15/86

Title: (Cover letter enclosing site reports and results of inorganic analyses of well and surface water sampling)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: DeRosa, Pat: NC Dept of Human Resources
Recipient: Anderson, Meredith Clarke: US EPA

Document Number: CEL-001-0650 To 0651 Date: 04/30/86

Title: (Letter describing the overview site visit on 03/12/86)

Type: CORRESPONDENCE
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0701 To 0702 Date: 05/06/86

Title: (Letter summarizing work completed on the RI/FS during 04/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA
Attached: CEL-001-0704 CEL-001-0707 CEL-001-0709 CEL-001-0711 CEL-001-0732 CEL-001-0734

Document Number: CEL-001-0652 To 0700 Parent: CEL-001-0653 Date: 05/07/86

Title; Remedial Investigation/Feasibility Study Oversight/Technical Support Work Plan for Celanese Fiber Operation Site Shelby, NC Volume I

Type: PLAN
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: none: US EPA

Document Number: CEL-001-0653 To 0654 Date: 05/07/86

Title: (Cover letter forwarding Oversight and Technical Support Work Plan)

Type: CORRESPONDENCE
Author: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)
Recipient: Townsend, Gena D: US EPA
Attached: CEL-001-0652 CEL-001-0696 CEL-001-0700

Document Number: CEL-001-0703 To 0703 Date: 05/16/86

Title: (Memo attaching overivew of sampling activities during 03/24/86 through 03/26/86)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Sloan, Fred: US EPA
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0704 To 0705 Parent: CEL-001-0701 Date: 06/05/86

Title: (Letter summarizing work completed during 05/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0357 To 0358 Parent: CEL-002-0284 Date: 06/05/86

Title: (Letter presenting 05/00/86 Status Report)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0706 To 0706 Date: 07/01/86

Title: (Memo describing 06/23/86 through 06/25/86 oversight insepection at site)

Type: CORRESPONDENCE
Author: Wilson, Charles H: Camp Dresser & McKee (CDM)
Recipient: Pierce, Jeffrey A: Camp Dresser & McKee (CDM)

Document Number: CEL-002-0359 To 0360 Parent: CEL-002-0284 Date: 07/07/86

Title: (Letter presenting 06/00/86 Status Report)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0289 To 0289 Parent: CEL-002-0284 Date: 07/30/86

Title: (Memo forwarding Consent Agreement)

Type: CORRESPONDENCE
Author: Ross, William E: Fiber Industries
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0707 To 0708 Parent: CEL-001-0701 Date: 08/08/86

Title: (Letter summarizing work completed during 07/00/86)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0361 To 0362 Parent: CEL-002-0284 Date: 08/08/86

Title: (Letter summarizing work completed during 07/00/86)

Type: CORRESPONDENCE
Author: Carter, Larry: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0709 To 0710 Parent: CEL-001-0701 Date: 09/10/86

Title: (Letter summarizing work completed during 08/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0363 To 0364 Parent: CEL-002-0284 Date: 09/10/86

Title: (Letter summarizing work completed during 08/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0711 To 0711 Parent: CEL-001-0701 Date: 10/10/86

Title: (Letter summarizing work completed during 09/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-0365 To 0365 Parent: CEL-002-0284 Date: 10/10/86

Title: (Letter summarizing work completed during 09/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0712 To 0712 Date: 10/14/86

Title: (Memo confirming a conversation regarding the submittal of the Feasibility Study)

Type: CORRESPONDENCE
Author: Lucia, Shirley: Soil & Material Engineers (S&ME)
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-001-0713 To 0730 Date: 10/23/86

Title: (Memo attaching Region IV data on split samples)

Type: CORRESPONDENCE
Author: Hooper, Charlie: US EPA
Recipient: Townsend, Gena D: US EPA

Document Number: CEL-002-1454 To 1455 Parent: CEL-002-0777 Date: 10/23/86

Title: (Letter stating that all laboratory analyses conducted by Davis & Floyd, Inc and Triangle Lab is complete with list of deficiencies in analytical results)

Type: CORRESPONDENCE
Author: McCord, John H: Davis & Floyd
Recipient: Lucia, Shirley: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0731 To 0731 Date: 10/31/86

Title: (Letter enclosing various site reports and results of inorganic analyses of well and surface water samples)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Moore, Ben: US EPA
Recipient: Perry, Doug: Cleveland, NC, County of

Document Number: CEL-002-0366 To 0367 Parent: CEL-002-0284 Date: 11/10/86

Title: (Letter summarizing work completed during 10/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-1452 To 1452 Parent: CEL-002-0777 Date: 11/10/86

Title: (Letter enclosing final data on project #1175-85-1050A)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: McCord, John H: Davis & Floyd
Recipient: Lucia, Shirley: Soil & Material Engineers (S&ME)

Document Number: CEL-002-1453 To 1453 Parent: CEL-002-0777 Date: 11/10/86

Title: (Letter listing corrections/additions for letter dated 10/23/86)

Type: CORRESPONDENCE
Author: McCord, John H: Davis & Floyd
Recipient: Lucia, Shirley: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0732 To 0733 Parent: CEL-001-0701 Date: 12/09/86

Title: (Letter summarizing work completed during 11/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0368 To 0369 Parent: CEL-002-0284 Date: 12/09/86

Title: (Letter summarizing work completed during 11/00/86)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0805 To 0805 Parent: CEL-001-0751 Date: 12/19/86

Title: (Letter with comment to add to list mailed on 12/11/86)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0734 To 0734 Parent: CEL-001-0701 Date: 01/10/87

Title: (Letter summarizing work completed during 12/00/86)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0735 To 0735 Date: 02/09/87

Title: (Letter summarizing work completed during 01/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA
Attached: CEL-001-0748 CEL-001-0750 CEL-001-0811

Document Number: CEL-002-0371 To 0371 Parent: CEL-002-0284 Date: 02/09/87

Title: (Letter summarizing work completed during 01/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0736 To 0736 Date: 02/12/87

Title: (Letter enclosing status reports from 10/00/86 to 02/00/87 and Feasibility Study Work Plan)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Moore, Ben: US EPA
Recipient: Lavender, Jackie: Celanese Corporation

Document Number: CEL-001-0737 To 0737 Date: 02/12/87

Title: (Letter enclosing status reports and Feasibility Study work Plan for repository)

Type: CORRESPONDENCE
Condition: MISSING ATTACHMENT
Author: Moore, Ben: US EPA
Recipient: Perry, Doug: Cleveland, NC, County of

Document Number: CEL-001-0738 To 0738 Date: 02/18/87

Title: (Letter stating that there are no comments on the Feasibility Study Work Plan at this time)

Type: CORRESPONDENCE
Author: Swallow, June A: NC Dept of Human Resources
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0739 To 0740 Date: 02/23/87

Title: (Memo presenting comments on the draft RI and Analytical Data Reports dated 1986)

Type: CORRESPONDENCE
Author: Pietrosewicz, Casimar V: Agency for Toxic Substances & Disease Registry (ATSDR)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0741 To 0747 Date: 02/28/87

Title: (Letter providing comments on the Draft RI)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-001-0748 To 0748 Parent: CEL-001-0735 Date: 03/06/87

Title: (Letter summarizing work completed during 02/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0372 To 0372 Parent: CEL-002-0284 Date: 03/06/87

Title: (Letter summarizing work completed during 02/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0749 To 0749 Date: 03/09/87

Title: (Letter explaining Superfund Amendments and Reauthorization Act of 1986 - SARA - and encouraging contact with EPA to discuss impact of SARA on site)

Type: CORRESPONDENCE
Author: Tobin, Patrick J: US EPA
Recipient: Pullen, James C: Celanese Corporation

Document Number: CEL-001-0750 To 0750 Parent: CEL-001-0735 Date: 04/10/87

Title: (Letter summarizing work completed on the RI/FS during 03/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-[illegible]0751 To 0752 Date: 04/24/87

Title: (Letter forwarding to Volume I and II of draft RI with comments from EPA)

Type: CORRESPONDENCE
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA
Attached: CEL-001-0753 CEL-001-0801 CEL-001-0805

Document Number: CEL-001-0753 To 0805 Parent: CEL-001-0751 Date: 05/01/87

Title: Final Feasibility Study Work Plan Celanese Fibers Operations Shelby, NC

Type: PLAN
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: none: US EPA

Document Number: CEL-002-0374 To 0374 Parent: CEL-002-0284 Date: 05/10/87

Title: (Letter summarizing work completed during 04/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0811 To 0811 Parent: CEL-001-0735 Date: 05/11/87

Title: (Letter summarizing work completed during 04/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-001-0812 To 0812 Date: 05/14/87

Title: (Letter concerning the meeting to discuss responses to comments for the RI report and submittal of Final RI report)

Type: CORRESPONDENCE
Author: Lucia, Shirley: Soil & Material Engineers (S&ME)
Recipient: Moore, Ben: US EPA

Document Number: CEL-002-0001 To 0283 Date: 06/01/87

Title: Final Remedial Investigation Report Volume I - Text, Tables and Figures

Type: PLAN
Condition: MARGINALIA
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: US EPA

Document Number: CEL-002-0284 To 0776 Date: 06/01/87

Title: Final Remedial Investigation Report, Appendix Volume I, Appendix A through O

Type: PLAN
Condition: MARGINALIA
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: US [illegible]
Attached: CEL-002-02[illegible] CEL-002-0290 CEL-002-0305 CEL-002-0306 CEL-002-0307 CEL-002-0308 CEL-002-0311
CEL-002-03[illegible] CEL-002-0327 CEL-002-0328 CEL-002-0332 CEL-002-0337 CEL-002-0339 CEL-002-0340
CEL-002-0342 CEL-002-0344 CEL-002-0348 CEL-002-0351 CEL-002-0355 CEL-002-0357 CEL-002-0359
CEL-002-0361 CEL-002-0363 CEL-002-0365 CEL-002-0366 CEL-002-0368 CEL-002-0370 CEL-002-0371
CEL-002-0372 CEL-002-0373 CEL-002-0374 CEL-002-0375

Document Number: CEL-002-0375 To 0376 Parent: CEL-002-0284 Date: 06/09/87

Title: (Letter summarizing work completed during 05/00/87)

Type: CORRESPONDENCE
Author: Glover, Everett W: Soil & Material Engineers (S&ME)
Recipient: Glenn, Michelle: US EPA

Document Number: CEL-002-0777 To 1099 Date: 06/22/87

Title: Final Remedial Investigation Report Appendix Volume II Appendix P Through S

Type: PLAN
Condition: MARGINALIA
Author: Barone, John C: Soil & Material Engineers (S&ME)
Recipient: none: US EPA
Attached: CEL-002-1100 CEL-002-1451 CEL-002-1452 CEL-002-1453 CEL-002-1454 CEL-002-1456 CEL-002-1622

Document Number: CEL-003-0001 To 0001 Date: 06/23/87

Title: (Memo announcing public meeting for 07/21/87)

Type: CORRESPONDENCE
Author: Moore, Ben: US EPA
Recipient: Thompson, Hagan: US EPA

Document Number: CEL-003-0003 To 0111 Parent: CEL-003-0002 Date: 07/21/87

Title: Final Report - Transcript of the Public Meeting - Celanese Fibers Operations Site Remedial Investigation

Type: PLAN
Author: Loyld, Sharon L: Booz Allen & Hamilton
Recipient: none: US EPA

Document Number: CEL-001-0806 To 0810 Date: 08/27/87

Title: (Letter explaining an error made on original Form 1 for sample GW-017)

Type: CORRESPONDENCE
Author: McCord, John H: Davis & Floyd
Recipient: Glover, Everett W: Soil & Material Engineers (S&ME)

Document Number: CEL-003-0002 To 0002 Date: 11/12/87

Title: (Letter forwarding Final Report "Transcript of the Public Meeting - Celanese Fibers Operations Site, Remedial Investigation")

Type: CORRESPONDENCE
Author: Butler, [redacted] P: Camp Dresser & McKee (CDM)
Recipient: Waetjen, [redacted]: US EPA
Attached: CEL-003-000[illegible]

Document Number: CEL-003-0112 To 0116 Date: 01/01/88

Title: Fact Sheet - CFO Superfund Site Feasibility Study

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-0117 To 0507 Date: 02/26/88

Title: Final Feasibility Study Report Operable Unit I - Groundwater Public Health Assessment for Celanese Fibers Operations

Type: PLAN
Author: Hardie, Michael G: Soil & Material Engineers (S&ME)
Recipient: none: US EPA

Document Number: CEL-003-0508 To 0509 Date: 03/23/88

Title: Declaration for the Enforcement Record of Decision

Type: LEGAL DOCUMENT
Author: DeHihns, Lee A: US EPA
Recipient: none: none
Attached: CEL-003-0510

Document Number: CEL-003-0583 To 0593 Parent: CEL-003-0582 Date: 07/20/88

Title: Health Assessment for Celanese Fibers Operation NPL Site

Type: PLAN
Author: Carter, Chebryll J: US Dept of Health & Human Services
Recipient: none: none

Document Number: CEL-003-0582 To 0582 Date: 07/27/88

Title: (Letter forwarding Health Assessment for site)

Type: CORRESPONDENCE
Author: Pietrosewicz, Casimar V: Agency for Toxic Substances & Disease Registry (ATSDR)
Recipient: Green, Richard D: US EPA
Attached: CEL-003-0583

Document Number: CEL-003-1895 To 1901 Parent: CEL-003-1490 Date: 10/12/88

Title: Appendix VII University of Central Florida Incineration Report

Type: PLAN
Author: Clausen, Christian: University of Central Florida
Recipient: none: Soil & Material Engineers (S&ME)

Document Number: CEL-003-1902 To 1913 Parent: CEL-003-1490 Date: 11/11/88

Title: Appendix VIII Treatability Study Report

Type: PLAN
Author: none: KiBer Associates, Inc.
Recipient: none: Westinghouse

Document Number: CEL-003-0594 To 1107 Date: 01/01/89

Title: Final Feasibility Study Report - Operable Unit 2 - Source Material - Hoechst Celanese Facility, Shelby, North Carolina - Volume 1: Text, Appendices I Through III

Type: PLAN
Author: Mays, Michael K: Soil & Material Engineers (S&ME)
Recipient: none: US EPA
Attached: CEL-003-0786 CEL-003-0804 CEL-003-0818

Document Number: CEL-003-0818 To 1107 Parent: CEL-003-0594 Date: 01/01/89

Title: Appendix III: Final Expanded Characterization Study - Glycol Recovery Unit Sludge and Burn Pit Area - Hoechst Celanese Facility, Shelby, North Carolina

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1108 To 1489 Date: 01/01/89

Title: Final Feasibility Study Report - Operable Unit 2 - Source Material - Hoechst Celanese Facility, Shelby, North Carolina - Volume 2: Appendices, Appendices IV, A Through C

Type: PLAN
Author: Mays, Michael K: Soil & Material Engineers (S&ME)
Recipient: none: US EPA
Attached: CEL-003-1109 CEL-003-1210 CEL-003-1220 CEL-003-1336

Document Number: CEL-003-1109 To 1209 Parent: CEL-003-1108 Date: 01/01/89

Title: Appendix IV Final Treatability Study - Biological Treatment of the Glycol Recovery Unit Sludge - Hoechst Celanese Facility, Shelby, North Carolina

Type: PLAN
Author: none: none
Recipient: none: none

Document Number: CEL-003-1490 To 1931 Date: 01/01/89

Title: Final Feasibility Study Report - Operable Unit 2 - Source Material - Hoechst Celanese Facility, Shelby, North Carolina - Volume 3: Appendices, Appendices IV, D and E, V Through IX

Type: PLAN
Author: Mays, Michael K: Soil & Material Engineers (S&ME)
Recipient: none: US EPA
Attached: CEL-003-1491 CEL-003-1841 CEL-003-1847 CEL-003-1865 CEL-003-1895 CEL-003-1902 CEL-003-1914

Document Number: CEL-003-1932 To 1934 Date: 01/11/89

Title: (Cover letter transmitting the final draft Feasibility Study Report)

Type: CORRESPONDENCE
Author: Glenn, Michelle: US EPA
Recipient: Crosby, Lee: NC Dept of Human Resources

Document Number: CEL-003-1937 To 1937 Parent: CEL-003-1935 Date: 01/18/89

Title: (Letter estimating costs for remedial services)

Type: CORRESPONDENCE
Author: Dukes, Robert D: GSX Services, Inc.
Recipient: Caldwell, Ron E: Celanese Corporation

Document Number: CEL-003-1949 To 1953 Parent: CEL-003-1947 Date: 01/18/89

Title: (State of South Carolina Executive Order No. 89-03 concerning hazardous waste treatment and disposal facilities in the State)

Type: LEGAL DOCUMENT
Author: Campbell, Carroll A, Jr: SC, State of
Recipient: none: none

Document Number: CEL-003-1935 To 1938 Date: 02/07/89

Title: (Letter submitting comments on the Feasibility Study Report)

Type: CORRESPONDENCE
Author: Mayrose, W C: Celanese Corporation
Recipient: Glenn, Michelle: US EPA
Attached: CEL-003-1937

Document Number: CEL-003-1939 To 1939 Date: 02/08/89

Title: (Letter transmitting the Operable Unit Two Feasibility Study and Proposed Plan Fact Sheet)

Type: CORRESPONDENCE
Author: Hallahan, Frances: Camp Dresser & McKee (CDM)
Recipient: Harvell, Rose: US EPA
Attached: CEL-003-1940

Document Number: CEL-003-1940 To 1946 Parent: CEL-003-1939 Date: 02/08/89

Title: Operable Unit Two Feasibility Study and Proposed Plan Fact Sheet - Celanese Fibers Operations Site - Cleveland County, North Carolina

Type: PLAN
Author: Lloyd, Sharon L: Booz Allen & Hamilton
Recipient: none: none

Document Number: CEL-003-1947 To 1948 Date: 02/08/89

Title: (Letter supporting Hoechst Celanese's recommended remedial approach to Operable Unit Two)

Type: CORRESPONDENCE
Author: Caldwell, Ron E: Celanese Corporation
Recipient: Glenn, Michelle: US EPA
Attached: CEL-003-1949

Document Number: CEL-003-1954 To 1954 Date: 02/09/89

Title: (Letter rejecting Hoechst Celanese's preference for off-site incineration)

Type: CORRESPONDENCE
Author: Glenn, Michelle: US EPA
Recipient: Mayrose, W C: Celanese Corporation

Document Number: CEL-003-1955 To 1955 Date: 02/09/89

Title: (Press release announcing a public meeting to be held on February 16, 1989)

Type: OTHER
Author: none: US [illegible]
Recipient: none: none

Document Number: CEL-003-1956 To 1956 Date: 02/09/89

Title: (Announcement of the February 16, 1989 public meeting from the Shelby Star)

Type: NEWS CLIPPING
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-1957 To 1957
Date: 02/10/89

Title: (Example of letter sent to media transmitting a public meeting announcement and Fact Sheet)

Type: CORRESPONDENCE
Author: Lloyd, Sharon L: Booz Allen & Hamilton
Recipient: Clemmer, Donna: Shelby Star
Attached: CEL-003-1958 CEL-003-1960

Document Number: CEL-003-1958 To 1959
Parent: CEL-003-1957
Date: 02/10/89

Title: (List of media representatives receiving copies of the public meeting announcement and the Fact Sheet)

Type: OTHER
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-1960 To 1960
Parent: CEL-003-1957
Date: 02/10/89

Title: (Announcement for the public meeting to be held February 16, 1989)

Type: OTHER
Author: none: US EPA
Recipient: none: none

Document Number: CEL-003-1961 To 1961
Date: 02/11/89

Title: "EPA to Address Cleanup of Hazardous Waste Site" (article from The Shelby Star newspaper)

Type: NEWS CLIPPING
Author: Clemmer, Donna: Shelby Star
Recipient: none: none
